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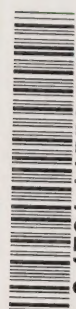
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Toward an Atlantic Coast Commercial Fisheries Licensing System

A Report Prepared for the
Department of Fisheries and Oceans
Government of Canada

by C.R. Levelton



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COMMERCIAL FISHERIES
LICENSING SYSTEM

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The depleted state of certain east coast fishery resources which has called for severe restrictions of fishing effort and the need to limit entry to most fisheries have combined in recent years to create dissent and dissatisfaction amongst users of the resource. This, in turn, has reflected adversely upon the current licensing system which is complicated and confusing and not easily understood by those in the fishing industry or even by those administering the system.

Since 1967, when limited entry was first applied to the Maritime Provinces lobster fisheries, a series of progressively restrictive measures involving moratoria on the issue of licences and replacement of certain fishing fleet units, reduced catch quotas, shortened fishing seasons and allocation of the catches amongst users, both offshore and inshore, have been put in place.

These factors have contributed to the creation of near intractable problems for the resource managers who have been charged with devising measures to rehabilitate the various species and stocks while, at the same time, attempting to keep all elements of the fleet operating as profitably as possible.

Because of the problems outlined above, this study was initiated and carried out under contract for the Department of Fisheries and Oceans. I would be remiss if my sincere thanks were not extended to the staff of Fisheries Management, Atlantic, who willingly provided me with advice and information based upon a wealth of knowledge and experience and who gave invaluable assistance in arranging meetings with

representatives of fishermen, fish buyers and processors and provincial fisheries administrations.

Particular thanks are extended to Mr. J.W. Carroll of Ottawa headquarters of Fisheries and Oceans, Mr. E.B. Dunne of the Newfoundland Region, Mr. D.A. MacLean of the Maritimes Region, Mr. A. Proulx of the Quebec Region and Miss Lynn Hacker, secretary, who were members of the task force working with me on the study. Their competence and dedication made possible the completion of the study within the limited time available.

I must also express my deepest appreciation to the representatives of fishermen's organizations, fish buyers and processors and provincial fisheries administrations who received me and members of the task force with the utmost courtesy. All were forthright in stating their views and in advancing proposals toward resolution of the manifold licensing problems.

Finally, I recognize that certain of the problems and issues associated with the licensing system are not easily resolved. In presenting this report with its recommendations and conclusions, I fully appreciate that it will be impossible to meet the hopes and aspirations of all users of the resource. However, based upon advice received during consultations, rather extensive literature research and lengthy and detailed discussions within the task force, a report has emerged which, I hope, takes a common sense approach to the issues and problems. Hopefully, it will culminate in an Atlantic licensing system which is better understood and administered without undue difficulties.

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CHAPTER 1

INTRODUCTION AND TERMS OF REFERENCE

To the uninitiated, the fishing industry is a relatively simple, minor sector of the Atlantic economy. In fact, this industry is important and extremely complex given the multiplicity of species, the areas in which marine species are harvested, the types of fishing craft, the natural elements, the attitudes of those involved, processing techniques and marketing mechanisms.

Some 40,000 fishermen participate in the primary sector of the Atlantic coast fishery utilizing 28,000 fishing craft of various sizes to harvest over a million tons of fish having a first sale value of approximately 400 million dollars. Products derived from some 45 important species are processed by 20,000 employees in 500 processing establishments located in hundreds of small and medium sized communities. The plant products, having a value of over a billion dollars, are ultimately exported throughout the world.

As the fishing industry is one of the cornerstones of the Atlantic coast economy, so the licensing policy, which determines participation in the industry, is naturally a cornerstone of the fishery.

The federal government is responsible for issuing all commercial fishing licences on the east coast. In Quebec, however, the provincial government has been issuing licences for most of the fisheries, the exceptions being licences for trawlers and draggers, herring purse-seiners and large sealing vessels.

Recently, the Atlantic coast licensing system has become overburdened, inconsistent in application, cumbersome, misunderstood and somewhat unresponsive. Because of these deficiencies and the need to build a strong foundation for the future, the Minister of Fisheries and Oceans directed that an overall review of licensing for the Atlantic coast be undertaken through the consultative process on a priority basis. The terms of reference for the Atlantic coast licensing review were as follows:

- A. Review and evaluate the licensing systems of Canada's east coast commercial fisheries and provide recommendations concerning the role and type of a future licensing and fee system. Particular emphasis will be placed on the groundfish fishery and its relationships with other fisheries. Without restricting the generality of the foregoing, the study will consider:
- (1) The fisheries resource, present and future, as it relates to existing harvesting capacity;
 - (2) Distortions and uncertainties which have developed as a result of the present licence policy in certain fisheries;
 - (3) The problems of entry control in the east coast fisheries;
 - (4) The future structure and ownership of the fishing fleet and the creation of a fishing profession by development of appropriate licensing policies;
 - (5) The administrative requirements, structures and costs of alternative options for managing, licensing and fee structures.

- B. Consult during the course of the study with fishermen, fish buyers and processors and with provincial administrations.
- C. Provide to the Minister periodic progress reports and a final report by April 15th, 1979.

Two rounds of consultations were held with representatives of fishermen's organizations, fish buyers and processors and provincial fisheries administrations during the winter of 1978/79. A schedule of the meetings held is appended to this report.

This report will seek to fulfill the terms of reference in the following manner. An overview of the resource situation and its implications for licensing will be presented in Chapter 2 immediately following. A review of legislative jurisdiction in fisheries appears in Chapter 3. General objectives for a licensing system are addressed in Chapter 4, while the theoretical and practical rationale for limited entry will be covered in Chapter 5. The major elements and issues of licensing are assessed in Chapter 6. Chapter 7 deals with administrative arrangements for Atlantic licensing. Finally, conclusions and recommendations arising from the report will be contained in Chapter 8.

CHAPTER 2

THE RESOURCE SITUATION AND GENERAL IMPLICATIONS
FOR ATLANTIC COAST LICENSING

The following sections on resource prospects are extracted, with permission, from the comprehensive forecasts prepared by scientists of the Department of Fisheries and Oceans entitled, "Resource Prospects for Canada's Atlantic Fisheries 1979-1985".

These projections, which are given in the form of a projected total allowable catch (TAC) for each stock, should be viewed only as a general guide to likely events. While 1979 predictions are based largely on formal calculations, and actual events should not differ widely from those predicted, projections of stock status in the 1980's are to a considerable extent best guesses. The precision of these estimates varies greatly depending on whether the assessment of the stock is based on known age composition, fishing mortality rates and predicted levels of recruitment, or on generalized production models relating overall landings and fishing effort, or on "best estimates from the scientists and managers concerned" based upon recent catch trends. Accurate predictions of strength of year-classes expected to recruit to the various stocks are impossible except for one or two years in advance; these "recruitment" predictions are, however, critical to any projections of catch and catch rates. Despite these uncertainties, an attempt has been made to provide long-term resource projections by major species and species groupings in order to provide a framework for fisheries development planning, although it must be borne in mind that the actual TAC for a particular stock in any year may differ widely from those projected here.

To develop these resource projections, certain assumptions have been made about management objectives in the 1980's. There has been a major change in fisheries management approach within the past few years, i.e., the abandonment of the maximum sustainable yield (MSY) concept as the basis for establishing levels of harvest. The objective of MSY management was to obtain the maximum sustainable (average) physical yield from the resource, i.e., to get every available ounce of sustainable production from the fish stocks. This approach had serious drawbacks, not the least of which was the cost of getting that production. Pursuit of MSY almost invariably meant low catch rates, relatively small fish, relatively low stock sizes and great variability in supply. Because of inadequacies in the data base, and lack of adherence to TACs, there was also a tendency for the target to be exceeded, resulting in stock decline. Indeed, catches, particularly in the years prior to the establishment of TACs, often exceeded the MSY and accelerated the introduction of management measures such as TACs.

Attention has recently been focussed on an alternative resource management concept called "optimum sustainable yield" or OSY. There will be no universal definition for this concept, since inherent in the phrase are economic and social as well as biological considerations. Thus, optimum sustainable yield will vary among species, over time, and among areas for a given species. Fisheries scientists no longer produce advice based on a lowest common denominator concept as MSY but give a range of alternative predictions corresponding to a range of possible management strategies. For the moment, a somewhat arbitrary reference

point which scientists call " $F_{0.1}$ " is in wide use. In general terms, this corresponds to a level of fishing beyond which increases in total catch relative to increases in fishing effort are marginal. This reference point need not be adopted in the long-term for all fish stocks within the Canadian 200-mile zone. Fish stocks can be managed to give stable average catch rates over the long-term at various levels within the biological limits of the species, taking into account fishing costs and market prices. Within biological limits, the supply can be managed up or down in response to social and economic factors including market prospects.

In 1977 and 1978, most of the major fish stocks within the Canadian Atlantic zone were managed at the level of fishing corresponding to $F_{0.1}$ in order to permit stock rebuilding; the projections assume that this level will be maintained through the mid-1980's. There are some current exceptions, the major one being the northeast Newfoundland-Labrador cod stock (2J and 3KL), for which it has been assumed that the 1978 strategy of fishing at a level less than $F_{0.1}$ in order to permit more rapid stock rebuilding will be maintained through the mid-1980's. A change in management strategy for any stock would, of course, alter significantly the projections given here. These projections also assume maintenance of recent average recruitment into the future and will require revision should there be significant departures from the recent average. They further assume that TACs are in fact taken and neither exceeded nor underutilized.

The catch rate projections are based upon a relative index of stock size (in weight) with a 1977 base index of 1.00. They are independent of vessel size and gear category and represent percentage increases or decreases compared with catch rate experienced by any particular vessel type in 1977.

It should also be noted that no attempt has been made to partition stocks straddling the 200-mile boundary into portions inside and outside 200 miles; instead, the projections have been made for these stocks as a whole. Flemish Cap stocks, which lie entirely outside 200 miles, have also been included. Although projections have been made also for Georges Bank fish stocks, future yields from this area will be dependent upon the management régime implemented over the next few years.

Groundfish

Cod

Total allowable catches in 1978 sum to 354,500 Metric Tons compared with a present estimate of maximum sustainable yield (MSY) of 960,000 MT when the stocks fully recover. This compares with a peak catch of 1,187,000 MT in 1968 from the northern area (Newfoundland-Labrador) and 263,000 MT in 1970 from the southern area (Scotian Shelf and Gulf of St. Lawrence). Substantial reductions in stock abundance have occurred throughout the Northwest Atlantic as a result of over-exploitation in the late 1960's and early 1970's. If cod stocks in general are managed at an "optimum fishing mortality" ($F_{0.1}$) with certain exceptions (e.g., northeast Newfoundland and Labrador) to provide for rapid stock rebuilding or greater availability to inshore fishermen, TACs of 470,500 MT,

569,500 MT and 697,500 MT are projected for 1980, 1982 and 1985 respectively. Stock recovery is already evident for the northeast Newfoundland-Labrador (2J and 3KL) and the southern Gulf of St. Lawrence (4T and 4VN (January to April)) cod stock.

Haddock

Haddock catches are currently about 25,000 Metric Tons from two stocks on the Scotian Shelf (4VW and 4X) which sustained catches of about 50,000 MT in the early 1960's. Stock levels in 4VW are still low and no further rebuilding is projected at present recruitment levels. Some slight increase in the 4X TAC is anticipated in the early 1980's with an increase in catch rate, but these catches would be above the expected long-term average.

It should be noted that the Grand Banks haddock stock has never recovered from a combination of recruitment failure and over-exploitation in the early 1960's.

Redfish

This is an extremely slow-growing and long-lived species, first entering the fishery at ages 7-10; individuals aged 20 and over comprise a significant part of catches from lightly-fished stocks. Thus, in order to rebuild a depleted stock, catches must be restricted to low levels for a considerable number of years.

Total catches of redfish from the Gulf of St. Lawrence and Scotian Shelf peaked at 170,000 Metric Tons in 1973. Catches off Newfoundland-Labrador fluctuated between 63,000 and 136,000 MT during

the period 1964-73. The present estimate of MSY, excluding the Gulf of St. Lawrence stock, is 140,000 MT. TACs for all redfish stocks add to 138,000 MT for 1978 and 135,000 MT for 1979. Overall, little change is anticipated with TACs of 137,900, 133,000 and 137,600 MT predicted for 1980, 1982 and 1985 respectively. The only significant changes expected are for the St. Pierre Bank (3P) stock, the TAC for which is expected to decline from 18,000 MT in 1978 to 5,000 MT by 1985, and the Scotian Shelf (4VWX) stock, for which the TAC is expected to increase from 20,000 to 30,000 MT in the same period.

Flatfish

Present estimates of yield at $F_{0.1}$ in the Newfoundland-Labrador area sum to 140,000-150,000 Metric Tons. TACs for 1979 total 134,000 MT, a reflection of reduced abundance of the Grand Banks plaice and yellowtail stocks. TACs are expected to increase to 141,500 MT, 146,000 MT and 149,000 MT in 1980, 1982 and 1985 respectively. This increase is expected to result from changes in abundance of Grand Banks plaice and yellowtail and St. Pierre Bank plaice where catch rates are expected to increase by approximately 25% by 1985.

On the Scotian Shelf, the current TAC is for plaice, witch and yellowtail stocks combined. The 1978 and 1979 TAC at 14,000 MT was set much lower than the TAC of 28,000 MT in 1977, in an attempt to generate higher stock levels and more economic catch rates. Yellowtail catches should be kept to a minimum for 5-10 years, but some improvement is forecast for plaice and witch; the combined flatfish TAC should increase to 16,000 MT in 1980, 18,000 MT in 1982 and 23,000 MT in 1985. The catch rate index is projected to be 1.13 in 1982 and 1.44 in 1985.

Catches of flatfish (plaice, witch, yellowtail and winter flounder) from the Gulf of St. Lawrence are projected to be approximately 19,000 MT during the 1980's compared with the 12,000 MT taken in 1977.

Pollock

Pollock on the Scotian Shelf (4VWX) and off the New England coast (Subarea 5) are managed as one stock. In recent years, about 65% of the catch has been taken from the Scotian Shelf. The 1977 and 1978 TACs were set at 30,000 Metric Tons. Under a continuation of the conservative management approach the TACs for pollock could reach 40,000 MT by 1985.

Roundnose Grenadier

Nominal catches decreased from 75,000 Metric Tons in 1971 to 15,400 MT in 1977. The TAC has been set at 35,000 MT for 1978 and 1979. Catches are projected to remain at this level to 1985. However, should fishing at greater depths reveal that the stock size is larger than previously calculated, the TAC could be increased,

Argentine

No change in TAC of this species from the present 20,000 MT level is projected.

Other Groundfish

It is expected that about 35,000 MT of other groundfish (species not currently subject to quota), e.g., white hake, wolffish and skate will be caught in Subareas 2 and 3 and the Gulf of St. Lawrence

each year to 1985. Catches of similar unregulated stocks on the Scotian Shelf are expected to yield in the order of 50,000 to 65,000 MT annually.

Groundfish Summary

TACs for 1979 for the traditional major groundfish species (cod, redfish, haddock, pollock, American plaice, witch, Greenland halibut and yellowtail) in Subareas 2, 3 and 4 (Labrador to Nova Scotia, including the Gulf of St. Lawrence) sum to 780,000 Metric Tons, the Canadian share of which is 572,000 MT. This compares with Canadian catches (of the same species) of 384,000 MT in 1974 (the lowest in recent years), 394,000 MT in 1975, 437,000 MT in 1976 and 474,000 MT in 1977. These figures do not include approximately 25,000-30,000 MT of miscellaneous unregulated groundfish caught by Canada. The highest Canadian Atlantic groundfish catch was 614,000 MT in 1966.

The 208,000 MT of such species allocated to countries other than Canada in 1979 consist of 128,000 MT of cod, 47,000 MT of redfish, 22,000 MT of flatfish, an estimated 9,000 MT of pollock (a transboundary stock shared with the U.S.A.) and 2,000 MT of haddock. It should be borne in mind that these figures include cod, redfish and American plaice on the Flemish Cap (entirely beyond 200 miles), portions of stocks straddling the 200-mile limit, and allocations for France in the area of St. Pierre and Miquelon and in the Gulf, the latter under Treaty rights.

TACs of the major groundfish species traditionally fished by Canada are expected to increase from 780,000 MT in 1979 to 850,000 MT in 1980, 957,000 MT in 1982 and 1,098,000 MT in 1985.

When groundfish species (e.g. skate) not subject to regulation at present, but caught regularly by Canadians, and groundfish not normally fished by Canadians, such as silver hake and grenadier are included, the overall TACs are predicted to increase from 1,010,000 MT in 1979 to 1,080,000 MT in 1980, 1,191,000 MT in 1982 and 1,342,000 MT in 1985. Thus, the predicted overall groundfish TAC in 1985 is more than double the 1977 Canadian Atlantic groundfish catch (511,800 MT) of all species.

Pelagic Fish

Herring

Catches from individual stocks have fluctuated widely. Total catches exceeded 500,000 Metric Tons in 1968-70, (mainly taken by Canada - peak 478,000 MT in 1970) but declined to 229,000 MT in 1976 (Canada - 225,000 MT). While some fluctuation on a stock-by-stock basis is expected, the overall TAC is forecast to increase gradually to 240,000-245,000 MT in 1985.

Mackerel

While total Northwest Atlantic catches have exceeded 400,000 Metric Tons in some years, the maximum catch off the Canadian coast was only 45,000 MT. The overall TAC for the Northwest Atlantic is expected to increase from 105,000 MT in 1977 to about 300,000 MT by 1985. Since this is a transboundary stock, the quantity to be harvested in the Canadian zone cannot be accurately projected but probably could be at least 40% of the TAC.

Capelin

Offshore fisheries for the species began in 1972 with the catch reaching 367,000 MT in 1975. However, since cod, whale and seal stocks will be rebuilding during the next few years, the quantity of capelin surplus to the needs of major predators may be expected to decrease. Thus, the TAC is projected to decline from 500,000 MT in 1978 to 225,000 MT by the early 1980's. (However, recent assessments have indicated a much severe reduction in TAC in 1979.)

Finfish Summary

Increases in groundfish TACs will be counterbalanced by an expected major decrease in the capelin TAC. The overall finfish TAC is projected to increase between 1978 and 1985 from 1.7 to 1.9 million Metric Tons. This compares with a 1977 Canadian catch of 773,000 MT and in a 1978 Canadian share of 921,000 MT.

Invertebrates

Lobsters

In the Newfoundland area, catches are expected to fluctuate between 1,100 and 2,000 Metric Tons. The present rate of fishing appears to be too high and the minimum legal size too low. In the Southern Gulf and along Nova Scotia, excessive fishing effort and existing low size limits could have already led to declines in catches in several areas. If size limits are increased to recommended levels,

and effort reduced substantially, a reduction in catch fluctuations from year to year and a long-term improvement in catches of up to 50% can be expected over recent average catches of 15,000-16,000 MT.

Scallops

The recent high catches from Georges Bank of 15,000-16,000 Metric Tons of meats have been based on above average year-classes. The abundance of 3-4 ring scallops entering the fishery in the next few years will be less than that of recent years. Wide fluctuations in catches will continue to reflect recruitment success and will be predictable no more than two years in advance. The long-term sustainable yield is estimated to be approximately 8,000-9,000 MT. Management alternatives for this stock are under review.

Shrimps

Preliminary analyses indicate that the sustainable yield from the Gulf of St. Lawrence is in the order of 8,000-9,000 Metric Tons per year. A shrimp fishery is also under development on the Labrador Shelf but no long-term forecast can yet be made. The 1978 TAC in this area was 7,100 MT. There is also a large shrimp stock in the Greenland zone that spreads into Canadian waters; Canadians have not yet fished this stock. A small fishery is also being developed in the deep holes on the eastern part of the Scotian Shelf.

Snow Crabs

The annual sustainable yield for Newfoundland waters has been estimated at 5,500 Metric Tons. It is not possible to predict catches

each year, but they are expected to be in the 2,500-6,000 MT range during the next decade. Catches in the Gulf are projected to average between 5,000 and 6,000 MT.

Squid

Abundance of squid in Canadian waters fluctuates widely from year to year and catches were less than 11,000 Metric Tons until 1975 when an offshore fishery was started and, in 1977, total catches reached 88,000 MT. A TAC of 100,000 MT was established for 1978. Present knowledge is insufficient to permit forecasting of TACs in advance of a particular year's fishery; hence, it is impossible to predict annual catches during the next decade.

GEOGRAPHIC OVERVIEW

Gulf of St. Lawrence

Overall, the groundfish resource situation in the Gulf offers no possibilities for increased effort on redfish or flatfish. Indeed, there is a need to reduce effort in order to rationalize the activities of the existing fleet. Even with reasonable prospects for cod overall, the recent level of groundfish effort in the Gulf has been more than enough to harvest the projected TACs. Pelagic species, mainly herring and mackerel, should produce somewhat increased catches, with the latter particularly offering possibilities for development. The major invertebrate species, however, appear to be fully exploited.

Scotian Shelf

Catches of groundfish on the Scotian Shelf are projected to increase gradually, with the exception of the central Scotian Shelf cod, TACs for which are expected to remain constant. The moderate recovery will be reflected in improved catch rates. Thus, the Scotian Shelf does not offer opportunity for any increase in effort for groundfish beyond that expended in 1977, or even to accommodate effort displaced from other fisheries. Some re-allocation of effort could, however, result from diversion into non-traditional species, e.g., squid, silver hake or argentine. Among pelagic species, there appears to be some potential for expansion of the Canadian mackerel fishery, particularly if offshore harvesting proves successful. The invertebrate resources of the Scotian Shelf do not offer any potential for expansion of effort, with the possible exception of deep sea red crab.

Grand Banks-South Newfoundland

The groundfish fisheries may accommodate some expansion provided that the by-catch in an expanded cod fishery does not significantly impact upon the flatfish stocks. Among the pelagic species, herring are fully exploited, but with some improvement in catch rates likely. Although the capelin TAC is expected to decrease to less than 50% of the current level, this species provides a major opportunity for expansion of Canadian fisheries, provided that this resource can be harvested economically.

Northern Newfoundland-Labrador

The dominant fishery in this area is on the northern cod stock. The TAC for this stock is expected to increase significantly (from 135,000 MT in 1978 to approximately 400,000 MT in 1985). Stock size is expected to attain levels that will greatly increase the availability to inshore fisheries. With the exception of capelin, other stocks in the area are likely to remain stable. The northern capelin situation is similar to that on the Grand Banks; there is potential for expansion of Canadian effort despite an anticipated reduction in the TAC. Invertebrate resources, especially shrimp, are attracting great attention but the shrimp fishery is not likely to offer opportunities much beyond those experienced in 1978.

Baffin Bay-Davis Strait

The resources in this area are not well known, particularly in the western area, i.e., within the Canadian zone. A small portion (currently regulated at 5,000 MT) of the Greenland shrimp stock complex extends into the Canadian zone and some Greenland halibut and roundnose grenadier have been taken there. Although the resources are unlikely to prove capable of sustaining landings in excess of current levels, there is potential for development of a Canadian fishery through displacement of foreign effort.

General Implications for Licensing

Because the resource base is only one of the factors influencing fleet viability and distribution of access to the resource, conclusions

based solely on it are dangerous. Moreover, because the resource projections do not indicate possible Canadian catches, they can, by themselves, lead to conclusions that are unwarranted in real life. Certainly, general implications for Atlantic Coast licensing can be indicated with the resource projections as a guide. However, exact quantification can only take place in the administration or implementation of licensing measures in specific fisheries. The following statements will be based primarily on the levels of fishing effort that may be sustainable in different fisheries and/or areas.

Groundfish

In the case of traditional groundfish species, very little effort over and above that of a replaced existing fleet seems possible. The only real room for expanded effort will be in Northern Cod (2J3KL) and possibly some of the other northern groundfish if catch rates and fishing conditions are suitable for Canadian vessels. In other major areas, the Gulf of St. Lawrence, Scotian Shelf, Grand Bank and South Newfoundland present levels of groundfish effort can at most be supported by expected resource improvements but, in some of these cases, an actual decrease in existing levels of effort will be required. Some of this may be accommodated by diversion of existing effort to new areas or species but for many existing fishing units this will not be possible.

In some of the more critical resource areas such as the Gulf, Scotian Shelf and South Newfoundland, a rearrangement of fishing effort appears desirable. Over the long term, this rearrangement might take the form of intermediate size units replacing large vessels as they are

moved into other fisheries and areas. While this rearrangement is under way, strict controls should be maintained on total groundfish effort in these areas. The opportunity afforded by the present inshore effort moratorium should be used to this end.

In general, traditional groundfish effort, especially offshore, should be restrained until the resource improvements create more viable fishing operations for existing units. The extent of this restraint will not be clear until replacement of the existing offshore fleet proceeds to a point when few really old vessels are still operating.

The opportunities for expansion created by groundfish currently underutilized by Canadians are still unclear. It does not appear that there are assured successes for vessels which would fish underutilized groundfish species only. Indeed, as the more traditional groundfish stocks improve, less interest may well result for species such as silver hake, roundnose grenadier and argentine. Vessels should be authorized to fish such species only on the clear understanding that access to the traditional groundfish will not be available.

Pelagic Fish

Overall, with the possible exception of mackerel and, now to a lesser extent, capelin, the pelagic species cannot support additional effort. Licensing in these fisheries appears faced with improving the viability of fishing units engaged and eliminating certain distortions in types of effort and the geographical distribution of access to these resources. In some areas, diversification of pelagic fishing effort into mackerel and capelin might be possible ways of tackling the effort-resource problem in traditional operations.

Invertebrates

Apart from offshore squid, where no real Canadian capacity exists, and northern shrimp, where Canadian effort is being developed, all major invertebrate fisheries have sufficient catching capacity from either a biological or economic viewpoint or both. In only a few minor cases is there room for additional fishing effort and then only on a local restricted basis. Few potential new fisheries exist in this overall category thus offering little scope of solving the catch-effort problem in existing fisheries. The main requirements for licensing in this group of fisheries is to generally concentrate on improving the economic viability of fishing operations, and to provide for redistribution of access to the resource in certain cases.

Development of a Canadian offshore squid fishery remains the classical case of initiating a fishery for an underutilized species. There is considerable interest in participating but clear Canadian content proposals are generally lacking. In some quarters, there is a reluctance to undertake squid fishing only, especially if an expensive vessel must be acquired for such a single operation. However, this reluctance is dwindling in the case of northern shrimp and may also occur in offshore squid. Licensing should allow existing offshore vessel owners to enter this fishery by replacing existing wetfish vessels with freezer trawlers which, of course, would also have access to other groundfish stocks. Other prospective entrants, who do not have offshore (groundfish) licences should be given the opportunity to acquire squid vessels on the clear understanding that they are fully Canadian owned and crewed and that access to traditional offshore species will not be available.

In general, the implication of the recent resource projections for licensing is that in almost all fisheries there must be greater concentration on management for economic purposes. This is an obvious consequence of an overall situation where traditional fisheries will not provide for significant expansion on all fronts. The degree of this restraint will have to vary from fishery to fishery or even from area to area. In many cases, the economic objective will have to include altering the present distribution of access to resources within an overall effort restriction. In certain underutilized fisheries, licensing must not be influenced simply by the fact that TACs are not being caught. Authorizing effort to increase in such cases may well ignore the basic requirements of profitable operations.

CHAPTER 3

A REVIEW OF LEGISLATIVE JURISDICTION IN FISHERIES

The following is simply a factual review of jurisdiction in the fisheries of Canada, up to the present time, by the author of this report.

Legislative jurisdiction over the fisheries was placed in the Parliament of Canada mainly because the waters of one province may flow into another, and because fish, in their feeding and spawning migrations, do not respect provincial boundaries. There may be several provinces bordering on one body of water, e.g., five provinces on the Gulf of St. Lawrence. Regulation of the fishery in such instances would be most difficult given the fact that there is not always agreement among all the provinces concerned. Today, international treaties must be negotiated for the protection of some of the coastal fisheries, and here again, regulation of the fisheries is facilitated by a single legislative jurisdiction.

Our Fathers of Confederation had at first some doubt as to what to do about fisheries. At one of their conferences, it was decided to place fisheries in the same category as agriculture and to provide for concurrent legislative jurisdiction between the central government and local governments. But the final decision placed fisheries exclusively within the federal legislative jurisdiction.

By Head 12 of Section 91 of the British North America Act 1867, the Parliament of Canada is given exclusive legislative authority over "Sea Coast and Inland Fisheries".

Immediately following Confederation, the Government of Canada assumed complete control over the fisheries of Canada. It was not long, however, before disputes arose as to proprietary rights in certain fisheries. Some of the provinces claimed these in virtue of Section 92 Head 13 of the British North America Act, which gives the legislatures of the provinces authority to make laws in relation to "Property and Civil Rights". These disputes culminated in a reference to the Judicial Committee of the Privy Council in London in 1898.

The Privy Council decided that the grant to the federal Parliament of legislative powers in relation to fisheries did not also transfer proprietary rights, which remained with the provinces unless expressly transferred to Canada, and that, therefore, the provinces may legislate as to fisheries from the point of view of property and civil rights, e.g., prescribing the mode in which a private fishery is to be conveyed, or the rights of succession in respect of it; the terms and conditions under which any fisheries owned by the provinces may be leased, etc.

Apart from this, the Privy Council held that the enactment of fishery regulations and restrictions is within the exclusive competence of the federal Parliament and is not within legislative powers of the provincial legislatures. It further decided, that in legislating in relation to fisheries, the federal Parliament is empowered to affect proprietary rights in the province insofar as it may be necessary for the regulation of fisheries. The same case laid down that both the central and local governments have power to impose licence duties on fishing for purposes of taxation.

Following this decision of the Privy Council, conferences were held for the purpose of finding some means of administering the different functions devolving upon federal and provincial governments. Administration of the non-tidal fisheries was handed over to those provinces desiring to take over this function, including the issue of fishery licences and the collection of revenue therefrom. In these instances, the federal staff of fishery officers was withdrawn and replaced by a staff of provincial officers.

Some of the sea-washed provinces further claimed proprietary rights, not only in inland or non-tidal waters, but also in the tidal waters. This question was settled in two further references to the Imperial Privy Council in 1913 and 1920, the first involving British Columbia and the second the Province of Quebec.

The Privy Council held that it is only in non-tidal fisheries that proprietary rights exist and that the fisheries in tidal waters are public fisheries and no proprietary rights exist therein. Therefore, the management and protection of these public privileges of fishing were placed by the British North America Act within the exclusive legislative authority of the Parliament of Canada, and there was nothing left within the domain of the provincial legislation in these waters and, therefore, no right of property or control in them.

As the result of these several judgments of the Judicial Committee of the Privy Council, it is now settled constitutional law - (1) that the federal Parliament has exclusive legislative authority over fisheries as such, both coastal and inland, (2) that in non-tidal waters, there is a right of property in fisheries, and that the province,

having power to legislate in respect of property and civil rights, may make laws as to the disposal of such fisheries by conveyance, lease, succession, etc. subject to the restriction as to the methods of fishing, seasons and other regulatory measures enacted by the federal Parliament under its general power to make laws in relation to fisheries, and, (3) that in tidal waters, there are no rights of property in the fisheries and, therefore, the provincial legislature is entirely without jurisdiction.

Although the power to make laws for the regulation of fisheries as such is exercised by the federal Parliament, enforcement of these laws has been, in many instances, undertaken by the provincial authorities, especially in the case of inland waters, where sport fishing is chiefly involved, and where enforcement of fisheries laws can be conveniently combined with enforcement of provincial game laws. Some provinces, e.g., Quebec and Ontario, also enforce some of the federal laws relating to the commercial fisheries.

In general, fishery regulations are made by the federal authority for each province separately. In those provinces where the federal government enforces regulations, the regulations are made after their necessity has been established by the federal fisheries management staff.

In the case of fisheries administered by a provincial government, the federal government is requested by that province to enact the required regulations.

In the public fisheries, (i.e. tidal waters) there is no question that federal authority extends (unless delegated) not only to the conservation and protection of fish, but to regulate fishing privileges and the words "fishing privileges" can be used synonymously with "fishing licences".

The Fisheries Act recognized this in Section 7 whereby the Minister is authorized, "in his absolute discretion, to grant leases and licences for fishing.

Section 7 reads as follows:

7. "The Minister may, in his absolute discretion, wherever the exclusive right of fishing does not already exist by law, issue or authorize to be issued, leases and licences for fisheries or fishing, wherever situated or carried on; but except as hereinafter provided leases or licences for any term exceeding nine years shall be issued only under authority of the Governor General in Council."

In recent years, it has been necessary to limit or restrict licences, not only for conservation reasons, but for economic and sociological reasons. This is accomplished by virtue of the authority to make regulations as contained within paragraphs (f) and (g) of Section 34 of the Fisheries Act which reads as follows:

34. "The Governor in Council may make regulations for the carrying out the purposes and provisions of this Act and, in particular, but without restricting the generality of the foregoing, may make regulations".

- (f) "respecting the issue, suspension and cancellation of licences and leases";

- (g) "respecting the terms and conditions under which a lease or licence may be issued".

This allows for the enactment of very wide ranging regulations respecting "the issue, suspension and cancellation of licences" and "the terms and conditions under which a lease or licence may be issued".

CHAPTER 4

OBJECTIVES OF A LICENSING SYSTEM

The discussions from both rounds of consultations revealed, that while almost all representatives of the groups with whom the task force met felt a good licensing system to be necessary, there was some considerable divergence of views as to the objectives of such a system. There were those who felt the need centred on obtaining a simple enumeration of fishermen and fishing vessels; others took the view that the sole purpose was to ensure perpetuation of the fisheries resource. Finally, there were those who voiced opinion that the questions of access to the resource and viability of fishing operations were fundamental in considering reasons for licensing in the primary sector of the fishing industry.

A proposal was also advanced from several sources that, as a condition of licensing, sound fish quality control practices should be carried out on fishing vessels to ensure that better quality raw fish is landed at the processing plants. This proposal carries the strong implication that one of the objectives of licensing is to promote the delivery of better quality fish dockside. While such an objective is in itself an admirable one, there is a great deal of doubt whether it would be practical to enforce through any licensing system, at least in its initial stages.

An element of fish quality control was introduced into commercial fisheries licensing in British Columbia about a decade ago. Registration was conditional upon vessels meeting certain minimum standards for fish

handling and holding on board. Initially, there were administrative difficulties of a practical nature and some delays in issuing licences which naturally incurred the anger of the fishermen concerned. Information received latterly suggests that these difficulties have been overcome.

The fishermen's organizations and even some buyers and processors in Atlantic Canada, while not opposed to quality control per se, strongly resist its implementation through licensing. They point out, and their arguments seem valid, that the same aim could be best accomplished through regulation (quite apart from licensing) or through prices paid at dockside based upon quality or a combination of both. Perhaps once a new licensing arrangement is in place and "shaken down", the tying of fish handling and holding capabilities of vessels into the licensing system could be considered.

In view of the varied interests in the Atlantic Coast fishing industry and the importance of this industry to the economy of the area, a good licensing system should have the following overall objectives (in order of priority):

- (a) to promote economic viability of fishing operations;
- (b) to promote just and equitable distribution of access to the fisheries resource;
- (c) to assist in directing fleet development in line with changing conditions in the fishery;
- (d) to aid in fisheries management and in conservation of the fisheries resource;
- (e) to facilitate administration, information gathering and enforcement.

CHAPTER 5

RATIONALE OF LIMITED ENTRY LICENSING

Development of the Theory and Principles

The problems of open access or common property fisheries have long been recognized by administrators, fishery managers and academics. Even in the early 19th century, writers recognized that sea fisheries, in which nobody held ownership rights, would not yield rent as would other industries characterized by private ownership. However, it was not until 1954 that Scott Gordon gave the first theoretical explanation of why common property fisheries develop situations in which there are excess inflows of labour and capital so that the returns to these factors of production at the margin are below those in other industries. This effect of the common property aspect was taken to explain, in large part, the low levels of income, and even poverty, amongst fishing communities. This new development in the theory of regulating fisheries also indicated that economic rent would not exist in such open access conditions because no individual operator will restrain his level of fishing effort (and hence, costs) if there is no assurance that others will do likewise. The individual tendency is to maximize catch and not net earnings over time. The consequence is that no one gains and the fishery in total produces no net returns above all costs. In certain fisheries, excess effort can lead even to resource depletion.

The first theoretical explanations of the results of open access fishing were followed shortly by the theory of sole ownership. This argument showed the difference between how a sole owner would prosecute a fishery (or fisheries) and the situation under open access or common

property. The sole owner would apply units of labour and capital in such combinations as to maximize his net return over time from a given fishery. The essential difference in the sole ownership case is that the operator of the fishery had ownership control of the fish resources harvested.

These significant developments in the theory of fisheries led to searches for ways in which to overcome the evils of open access. The initial attempts at developing methods to offset the common property problems of fisheries resulted in a number of different methods being advocated for controlling fishing effort. Initially, these proposals were aimed at preserving the fish resources as well as generating more economic situations in fisheries. It quickly became recognized that the various means of controlling fishing mortality would not necessarily lead to improvement of economic conditions in the fishery. Measures such as gear sizes, closed seasons, catch quotas, etc., were accepted as effective means of protecting fish resources, but they still left the economic problem of open access or common property unresolved. The problem that still remained was one of reducing the effective level of effort in the fishery. The generally accepted approach has become limitation of entry. Such types of measures have, initially, and even to this time, been centred on controlling the number of fishing units allowed in a particular fishery. In most cases, limitation of units is based on the number of vessels that are licenced to participate in a given fishery or a group of fisheries.

However, it was recognized early that, in the long term, simple limitation of the number of units would not lead to improved economic conditions, especially in terms of producing rent, because fishing effort

would not necessarily remain reduced. This led to development of various rationales for taxation to reduce fishing effort to the economic optimum level by increasing private costs of fishing. The application of taxation could be on units of effort or capital applied to a fishery, or on the level of landings made by individual units. The general conclusion has been that it is more effective to tax the output of fishing units than to tax the input. It has been demonstrated that a tax on landings can have the more positive effects on reducing fishing effort to a level where economic rent appears in the fishery. However, in actual practice, no such effective taxation systems have been imposed on any fisheries in the world. The problem is mainly a constitutional or political one in that taxing powers are not readily transferred to fishery management agencies. Also, in practical terms, imposition of a tax on landings would not be very well received in a fishery still suffering from low returns to labour and capital and when parts of the fishery resource are still in a state of depletion. While the theoreticians have not discarded the application of taxes, it is now generally accepted that net returns must be improved before applying such a measure as an effective control of fishing effort.

Since the application of limited entry in various fisheries, dissatisfaction, especially among academics, continues to exist with the management of these regulated fisheries. The dissatisfaction is caused by the over-application of capital that still develops in controlled fisheries even though the number of fishing units has been limited. This appears to be at the centre of the criticism of the B.C. salmon

licensing program where, while the number of vessel units has been limited, the amount of capital and the fishing effort has still increased. It is claimed this still amounts to over-capitalization, although a different sort than with the multiplication of units. In practical terms, it means that even when the number of vessels is limited, there is still a tendency for the privileged operators to over-invest capital by acquiring more technically advanced and costly equipment and vessels. In consequence, the fishery is still, or again, characterized by over-capitalization. There is more capital engaged in the fishery than is needed to take the level of catch and there is still excessive fishing effort. However, the situation should be clearly distinguished from the one at the other extreme where there is over-capitalization in open fisheries with depressed returns to both labour and capital.

The problem of over-capitalization, or over-capacity, developing even under limited-entry situations is also evident in other cases where the number of vessels are controlled, but the number of units of gear is left unrestricted. In such cases, the first tendency is for the licenced operators to increase the number of units of gear utilized which, in effect, continues to increase fishing effort. While again, it is different from an increase in effort under an open access situation, it still results in more equipment being used individually than is necessary in total.

Because of these concerns, the search for alternative mechanisms of entry limitation or, more properly, effort control has continued. The more significant result of this continued search is

the proposition that it is better to place the controls on outputs from a fishery than on the inputs. The argument is that if output is controlled, individual decisions can be made much more effectively. The arrangement proposed is similar to the system of national quotas that have been used by coastal states, like Canada, for other countries fishing in extended fishing zones. In other words, fishermen, vessel owners or companies would be given individual shares of a fishery (or quotas) and would be left free to decide how these are taken, both in terms of size and number of vessels, or amounts and types of gear.

This idea has considerable merits if the initial difficulty of setting and allocating the harvest shares or allotments can be resolved. Thereafter, sale, purchase or lease or allotments would give both fishermen and fishery managers more flexibility than if inputs are the control tool. Fishermen leaving the industry can sell allotments, or lease them, if planning only a temporary absence. Other fishermen have the opportunity to improve their operations by acquiring additional allotments from others or from the fishery management authority. The latter might have complete control over transfers of allotments to avoid monopoly control, uneven distribution, or also over-filling of total allowable catches. The management authority could also auction or otherwise allocate new shares as a fishery resource increases.

While there are no complete versions of this approach in use at this time, the system of national allocations in extended fishing zones is a variant of it. The Bay of Fundy Herring Club and the Labrador Shrimp licences are also two other variants of the idea. Future success

of this approach would depend in large measure on its not being confused with boat quotas per se which are seen as stifling competition and hindering efficient operations. Moreover, the costs of using this approach in all fisheries would simply not justify the results. However, in certain fisheries such as those where there is concentration of activity, both geographically and in numbers; where by-catches are not a real problem; where year to year catches are reasonably stable; and where there is not a tremendous imbalance between the resource and available effort, this approach might be worth considering. This approach has much merit in new fisheries, especially specialized ones.

Applications in Canada and Elsewhere

Limited entry began in Canada in the Maritimes lobster fishery in 1967, and was followed by the B.C. salmon fishery in 1968, as well as the Atlantic large purse-seine herring fishery. In 1973, a general application of the limited-entry approach was adopted by the Federal Government for most major Atlantic Coast fisheries. Virtually all of these limitation programs are based on restriction of the number of units allowed to participate. In certain instances, there are additional gear controls such as lobster trap or crab pot limits. The Canadian systems are a pretty straight forward application of limitation on the number of units engaged with the underlying rationale being improvement of economic conditions. In certain of the licence limitation programs, sale of licences has been permitted, resulting in increasing values for the fishing privilege. In other cases, transferability has not been allowed, with the consequence that the licence has acquired no explicit increase in value.

Applications of limited-entry management can now be found in many fisheries in most major countries. Western European countries have the following limited-entry fisheries: the Isle of Mann herring, Netherlands shrimp and Icelandic shrimp. Moreover, EEC, Iceland and Norway impose what is in effect limited licensing to foreign vessels operating in their Extended Economic Zones. While there is no application of licence limitation at the national level in the United States, there are a number of state licence limitation programs, most notably, the Alaska and Washington salmon fisheries. Japan has some of the oldest and most complex licence limitation systems of all, ranging from local immobile fisheries to distant water factory ship operations and all the range between. South Africa has a dual limitation program for pilchard/maasbanker that controls both fishing vessels and fish processing capacity. Australia has several licence limitation programs for important crustacean fisheries. New Zealand has passed licence limitation legislation and is preparing to apply the mechanism in specified fisheries. The only real licence limitation in South America is in the El Salvador shrimp fishery. Other South American systems are more properly termed restrictive and many are designed to provide revenue from foreign nationals fishing in extended fishing zones.

To describe in this context, the many examples of limited entry programs in other countries would serve no particular purpose. However, it is interesting to note that some of the Australian limited entry programs, such as for the Rock Lobster, are remarkably similar to those in place in Canada. On the other hand, the Japanese system includes granting of fishing privileges to groups of fishermen or communities in

some cases, for a period of years, usually five. The Japanese system is also characterized by no licence fees and no sale of the fishing privilege. At the other extreme is the herring licensing program in the California herring and herring roe fisheries. In the herring fishery, licences are assigned each year by a lottery system with no guarantee to current licence holders that they will be able to participate in the fisheries the following year. In the herring roe fishery, licences are awarded annually to the highest bidders. In general, licence limitation programs have been applied in fishing countries because of the knowledge of the dangers involved in allowing open access to stocks that are always insufficient to provide for total effort that could be attracted.

Atlantic Coast Views on Limited Entry

The present Atlantic Coast views on limitation of entry usually are directly influenced by the status of the persons expressing the view. These views range from more or less complete satisfaction with the present kinds of programs to complete dissatisfaction with limitation of entry per se. Those who have been engaged in limited-entry fisheries have come to realize the benefits to be obtained from this form of protection from new entrants and excessive effort. On the other hand, some people who are not involved with limited-entry fisheries usually argue for no controls other than total allowable catches. This position sometimes includes having no subsidies of any kind available, but that is not always clear. There is also an intermediate view that acknowledges the need for control of entry but wants it to take more consideration of cultural, social and related factors. The form of the latter are not really clearly specified.

Even amongst the supporters of various Atlantic Coast limited entry programs, there is an acknowledgement of the fact that, in many cases, there has been an unequal distribution of limited-entry licences in certain fisheries amongst local areas or groups of fishermen. This situation is usually caused by the way in which limited-entry programs are initially put in place, that is, on the basis of past performance in some base period prior to limitation of entry. This inevitably results in unequal distribution of licences amongst communities, fishermen, areas or provinces, as the case might be. This is also caused by the fact that limited-entry programs are very seldom, if ever, instituted in developing fisheries, but usually are put in place when a fishery already has excessive numbers of people and vessels involved. If limited-entry programs were instituted before such a situation developed, it may be possible to avoid uneven distribution of licences. Moreover, this becomes a difficult problem to solve once a limited-entry program has been put in place. Meeting all the demands for a more equitable distribution of licences may result in allowing too many additional entrants into a particular fishery to the detriment of both the newcomers and those already engaged. A related version of this concern is that increasing vessel size and costs will result in fewer and fewer vessels being supported in certain fisheries. The idea is being advanced that vessel size increases should be restricted in favour of allowing larger numbers to participate.

In certain fisheries, where the existing catch-effort relationship would not produce the usual average earnings increase,

control of entry appears related more to ability to dispose of catches during seasonal peaks in landings. The inshore fixed gear fisheries in many parts of Newfoundland are prime examples. The inshore effort may not cause concern for the resource but seasonal peaks in catch can prevent all operators from maximizing landings because of processing constraints. In such cases, control of effort is desirable but complete entry limitation may have disastrous side effects, especially if catches are cyclical. The measures advocated in such instances are usually a qualitative form of entry control that gives first right of sale to certain categories of fishermen. This privileged type of access might also extend to first choice of prime fishing locations or berths. While this is not outright entry limitation, it is a form of entry control which probably would remove the worst aspects of open entry in the particular fisheries for which it is advocated.

The arguments of those who favour no control of entry but only catch quotas combined with no subsidies are generally based on allowing free enterprise to operate. This is not different from an open-access arrangement; the argument of no subsidies simply clouds the issue. When subsidies are eliminated, initially, the less efficient operators would be forced out of the industry, creating, for a short period, improved returns for those remaining. However, the improved returns would eventually attract new entrants, even without subsidies, as well as precipitate increased capitalization by those who remain. After a short-term shake-down period, the end result would still be the same with over-capitalization, excessive capacity and depressed levels of

earnings. The only thing that would be achieved is that the resource would be protected through the imposition of catch quotas and the taxpayers will be spared subsidizing inefficient activities.

Another view of limited-entry control being widely discussed on the Atlantic Coast is that bona-fide inshore fishermen (however defined) should be allowed to participate in any fishery they desire. This is seen from two points of view; that of the bona-fide fishermen themselves, and that of fishery administrators or managers. Bona-fide fishermen see this as a means of allowing flexibility and diversification of operations and thereby giving individual fishermen the right to decide which fisheries they will participate in, depending on the relative returns from a given activity in any particular season. It would prevent non-bona-fide fishermen from participating in the choicest fisheries, either at all, or only after bona-fide fishermen have first choice of fishing operations or berths. Fishery administrators see this kind of arrangement as being much simpler in terms of controlling specific fisheries insofar as separate licence management programs would not have to be administered for different fisheries.

However, fishermen have conflicting views as to how such an arrangement would work. The holders of present limited-entry licences usually claim that they should be entitled to fish all available species, but that non-holders of such licences should not be permitted to participate in the limited-entry fisheries. The non-participants in limited-entry fisheries, on the other hand, argue that they should be entitled to take part in the limited-entry fisheries in addition to the

open fisheries where they are now engaged. This is probably implicit evidence that such an arrangement could not work in spite of the arguments being advanced in favour of it.

From the fisheries management point of view, resource conservation under such an arrangement would be extremely difficult. The essential fisheries management problem would be how to allocate effort amongst different types of activities and species so that individual fish stocks (particularly small ones) are not in danger. There is no evidence to suggest that even inefficient gears or small vessels would not deplete certain sedentary species such as lobsters, and more particularly, scallops. It might be argued that such resource conservation concerns could be handled through the imposition of quotas. However, the monitoring of catch quotas in the fisheries usually mentioned in this argument, such as lobsters and gill-net herring, would be virtually impossible. In such a case, the end result of such a limited entry system would be over-capitalization, depressed earnings, and, almost certainly, resource depletion. Moreover, in many cases, the resulting effort would be so disproportionate to the available resource that additional management measures would have to be adopted, both to protect the resource and allow some participation by all those entitled to diversify. These measures would undoubtedly include some or all of the following: gear limits or restrictions, minimum fish sizes, closed seasons or areas, vessel size or type restrictions, trip, weekly or monthly landing limits, complex by-catch regulations and boat quotas.

Conclusions

At this point in time, with the development of the theory of managing fishing effort, and the views that have been expressed by different segments of the Atlantic Coast fishery, it is hardly necessary to re-state the arguments in favour of limited entry to commercial fisheries. The evidence is readily available from present and past fishery situations. The following firm conclusions may be unpalatable to some but must be acknowledged. Under open entry, excessive quantities of capital and labour will enter a fishery and over-capacity will worsen as real prices rise. Biological resource depletion will occur unless fishing mortality is controlled by measures which raise the cost of fishing, or reduce the level of allowed total catch. Incomes will be depressed, and the fishery will not be able to finance replacement of capital assets. This will be compounded by the fact that while entry will tend to increase in good years, in bad years an equivalent reduction in capacity will not take place. It is safe to say, therefore, that without limited-entry control of some sort, even if not completely perfect, the fisheries will continue to be in an economically depressed situation. To put it another way, even limited-entry programs which may not be completely satisfactory would be definitely preferable to open access to all comers.

Some of the positive and practical advantages of limited entry, which are operative even with the several shortcomings of this approach, include the following:

1. It allows for increased incomes to labour and capital involved.

2. It prevents downward pressure on income caused by new entrants in years when returns are good and which continues even when returns deteriorate.
3. It encourages investment because of protection from the dissipation effects of new entry.
4. It provides a basis for improved financing capability by licenced operators. The limited entry fishing privilege increases the credit ratings of those participating.
5. It can allow for a more even distribution of benefits or access to the resource between individuals, areas or provinces.
6. It can provide for a more rational fishing pattern by participants if it gives assurances that allowed catches will not be taken up very quickly.
7. In some fisheries, it can help prevent depressing effects on average incomes caused by selling or landings quotas, effort limitations, etc., that are imposed by buyers in fisheries characterized by seasonal over-supply conditions.
8. It can aid in resource conservation if it provides an effective control of effort expended.
9. It will make subsidization of fishing operations unnecessary. Indeed, it will itself be a form of subsidy that does not call for expenditure of public funds.

10. In its most perfect form, it can provide a net return to the economy greater than would exist in its absence. This can take the form of a rent component in the income of participants or a substantial resource user fee being paid to the State.

CHAPTER 6

MAJOR ELEMENTS AND ISSUES OF THE LICENSING SYSTEM

There can be no doubt that almost any limited-entry type of management is infinitely superior to one of completely open access. The real problems that still remain are in the components of the limited-entry system, especially the following:

- (a) The initial distribution of the limited entry privileges.
- (b) The provisions made for control of replacements.
- (c) The conditions covering transferability of licences.
- (d) The criteria allowing for new entrants.
- (e) The evaluation mechanisms that are included in the program to determine desirable fleet size, earnings levels, etc.
- (f) The provision for including fishermen, companies and provinces in the licensing process.
- (g) The type of licence that is utilized, be it personal or vessel.
- (h) A clear statement of the objectives of the limited-entry program.

This chapter will address most of these elements and issues.

A. Personal/Corporate Licences Versus Vessel Licences

The type of licence used to effect management control is of paramount importance in any fishery licensing program. When the type of fishing licence is discussed, the debate usually centres on to whom or

what the privilege to engage in a fishing activity is issued. This is the subject dealt with in this section. While there are usually other types of licences in any comprehensive system, the limited entry privilege is the crucial instrument, even when general licensing of fishermen and universal registration of fishing vessels is also required.

It becomes somewhat difficult to separate a discussion of the type of limited entry licences from the question of transferability. The two are very closely related but a complete discussion of transferability is left to the next section. Many of the arguments presented about the type of licences are more directly relevant to whether or not the licence in question is transferable.

The alternatives that are argued for in Atlantic Canada are to issue the limited entry privilege to the fishing vessel used in that activity or to the person who operates the relevant fishing unit. The arguments for issuing limited entry privileges to vessels are based mainly on some or all of the following factors:

- (1) The capital asset that is acquired for the limited entry activity should bear the licence because it is then allegedly easier to acquire financing for that asset and also because the lender supposedly has greater security for loans advanced;
- (2) It provides a measure of protection to the vessel owner and his heirs and successors that would not exist if the licence were issued to an individual;

- (3) It makes control of fishing effort more effective insofar as the basic unit of fishing effort is the fishing vessel. Persons are often hard to distinguish and provide no real indication of fishing effort;
- (4) It allows for more effective licence suspension procedures because operation of the vessel itself can be prohibited;
- (5) Finally, vessel licences allow the owner to acquire a capital gain when the vessel (and licence) is sold and also allows a clear means of entry to a fishery by purchasing a vessel and the attached licence.

The arguments for issuing limited entry licences to individuals or corporations rather than to vessels consists of the following:

- (1) An inanimate object (the vessel or gear) should not receive a limited entry privilege but rather the owner or operator of it;
- (2) Attaching licences to vessels results in high market value for such licences. This view is generally broadened to include the position that no one should benefit from sale of a privilege granted by the state and that new entrants should not have to face the added costs associated with high licence values. These views are more relevant to the question of licence transfer or sale although it is generally assumed, in the Atlantic fisheries, that these will be part and parcel of a system that vests limited entry licences in vessels rather than individuals or corporations;

- (3) Eligibility criteria for receiving limited entry licences are best implemented on the basis of individuals rather than vessels. Therefore, individuals should be licenced rather than vessels.

At present, a variety of arrangements exist in the Atlantic Coast licensing structure. In some fisheries and Regions, the limited entry licence is deemed to rest with the vessel used. In other cases, the limited entry licences are issued to individuals to engage in a limited entry activity using a specified fishing unit or a stated amount and/or type of fishing gear. There is no real consistency of application across Regions or fisheries. In some cases, fishermen hold certain licences which are attached to the vessel and other licences that are issued to them as individuals. Licences issued for the following fisheries or activities are deemed to be issued to the vessel:

- groundfish otter trawling
- large purse seiners
- lobster fishing (Maritimes)
- offshore scalloping (vessels over 45 feet)
- sealing by large vessels

All other limited entry licences are understood to be issued to the individual or companies who receive the specified privileges. In Quebec, all licences issued by the Province are to individuals or companies and not to vessels.

One of the strongest arguments presented during the task force's consultations, and in briefs received, was that the licensing system should be simplified as much as absolutely possible. The ultimate

was seen to involve all required licensing being done with a single piece of paper. In view of the need to maintain effective control of fishing effort (the real purpose of limited entry or restrictive licensing), it is not considered possible to reduce all licensing requirements to a single document. However, steps towards simplification must start with deciding on a single type of limited entry licensing procedure. This must be coupled with a simple universal registration of commercial fishing vessels and a system of personal fishing licences.

The main purpose of this section is to resolve the question of whether limited entry licences (or privileges) should be issued to vessels or to individuals or corporate owners. While the arguments presented to the task force for licensing of individuals are considerably coloured by fears of licence speculation, the arguments for vessel licences are also influenced by perceived advantages of having the licence attached to a vessel. In any event, both points of view are basically rooted in the licence transfer question and the resultant effect on licence values. This question will be covered in the next section but, at this point, the following solution is offered to the vessel versus individual licensing issue:

In all Atlantic Coast fisheries, licensing should take the form of a licence issued to the eligible owner (individual or corporation) or, lessee in the case of a leased vessel, to use a specified registered fishing unit in a specified type or types of fishing activity.

Under this arrangement, the eligible owner, whether an individual or a corporation, would receive authority to engage in specified fishing activities using a particular registered fishing unit. These fishing activities would obviously include all limited-entry fisheries and those other fisheries where identification of participants is required for other management purposes. Control is maintained because the fishing unit is identified in the licence. Security to the holder is provided because the licence is in respect of a specified fishing unit. The entity receiving the authority (licence) is not required to physically operate it; this is important in the case of corporate entities or individuals who are not actual vessel operators.

The other documents required in a standardized licensing system should include:

- (1) A simple universal registration of all fishing units. This would be issued to the owner, owner/operator or lessee. It need not be done annually but every three to five years or when units change hands or are replaced.
- (2) Personal fishing licences.

The Atlantic Coast licensing system should be redesigned to provide for the issuing of categorized personal fishing licences. These personal licences might fall into three categories which would provide for differentiation of regular fishermen, apprentice fishermen or learners and casual fishermen. Categorization of licences would be a step towards establishing professional status for fishermen. The categories to be established and the related criteria must be devised in close consultation between the federal and provincial governments and participants in the primary sector of the fishing industry.

B. Transferability of Licences

Of equal importance to the question of the type of licence is whether or not that licence is freely transferable. Transfer of licence means the open sale or passing to another with the decision as to who receives the transferred licence resting solely with the current holder. Transfer does not include the removing of a licence by the current holder from one vessel to another, i.e., a replacement unit. An eligible licence holder is understood to be permitted to change the fishing unit he is using subject to any specific rules governing replacement of existing fishing vessels or units. The question of vessel replacement and also the "splitting" of licences amongst several fishing units is dealt with in later sections. At this time, the transfer, i.e., sale or passing of licences to others, will be covered.

There are two general schools of thought on this issue, one being that licence transfers should be permitted at the discretion of the current licence holders; the other that no transfers should be permitted. There is a third point of view that transfers should be allowed only under certain specific conditions and then only with the sanction or approval of the licensing authority.

The arguments within the industry for and against licence transfers invariably centre on the effects of free transferability on the market value of the licence. Those in favour of licence transfers are usually those who now hold limited entry licences for which there is a demand or those prospective buyers who could or would compete in the open market for such licences. Proponents of free transfers

also argue that the value obtained through sale of a freely transferable licence may constitute a fisherman's retirement or pension fund. It is also claimed that free transfer or sale of licences provides a ready and clear means for new participants to enter a fishery by purchasing a licence from a current holder. Also there is argument that the market value of licences in a limited entry fishery is a good barometer of the economic health of a fishery because it represents a current valuation of the expected stream of earnings from that fishery. Finally, some claims are made that freely transferable licences, if attached to the vessel, provide greater financial security both in obtaining loans and as collateral to the lender.

There are those who advance equally strong arguments against free transfer. One view is that no one should profit from sale of a privilege granted or created by the state. This view is compatible with the one to the effect that a licence is a privilege granted by the state and, moreover, the state could not create a right in fishing without a change in the Constitution or an Act of Parliament. It is also stated that free transfers make it extremely costly for new entrants to gain access to a fishery because licences must be purchased at high cost on the open market. Only those with sufficient financial resources or a source of credit are able to acquire licences. In addition, those who enter a fishery by purchase of a licence are faced with a higher fixed cost structure than the original participants who acquired their licences at the cost (relatively low) set by Government.

On the premise that a fishing licence is a privilege, and not a right, granted by the state, it is difficult to accept the argument

that licences should be freely disposed of by the current or original holders. Limited entry licence holders have a special privilege that was created by the state and not by themselves and which is not available to all citizens. The value obtained by free sale is not a function of how well the individual operator manages his fishing enterprise but rather of how effective is the fishery management program of the state. The market value is a public creation and is generally related to expectations based upon earnings of the top fishermen in a given fishery.

As for the arguments that the market value of the licence constitutes a man's retirement fund, it must be pointed out that limited entry licence holders already enjoy a privileged earnings position in relation to other fishermen who operate in open fisheries. This privileged earnings position allows them to take greater advantage of existing retirement or pension fund plans such as Canada Pension Plan and the host of commercially offered retirement savings plans. Indeed, the majority of working Canadians must make provision for their retirement incomes over their working lives and not from the sale of a real or intangible asset. In the Atlantic Coast fishery, many individual fishermen do not have limited entry licences nor do they have a preferred earnings position of operating in limited entry fisheries.

Likewise, the argument that licences should be freely transferable with the fishing unit for lending or credit purposes is not strictly valid. It is inconceivable that lending institutions, especially private commercial establishments, would ever be permitted to become the holders of limited entry licences through repossession of the fishing units that were financed. It is equally unlikely that the commercial financial institutions expect to become the holders of such licences.

On balance, it is felt that free transfers of limited entry licences should not be permitted. Free transfers would be acceptable if there were no concerns about the effect of high licence values, particularly on new entrants; about who acquires limited entry licences; about geographic distribution of such licences; or, about the undue concentration of fishing capacity either on the part of the processing companies or certain groups of fishermen. Limited transfers of licences under well publicized conditions would, of course, have to be done through the licensing authority. It would seem common sense to allow controlled transfers that enable an existing fishing enterprise to continue operations because of retirement, withdrawal or demise of a current licence holder. The new licence holder would have to become the operator of the existing enterprise as a minimum condition. If the existing enterprise cannot be maintained through such a limited transfer system, the limited entry licence should be withdrawn and possibly re-issued in accordance with appropriate criteria by the licensing authority.

C. Vessel Replacement Criteria

The question of replacing vessels used in a limited entry fishery or activity is twofold. On one hand is the question of whether replacement of existing vessels in such fisheries is automatic and left to the discretion of the vessel owner. On the other hand is the problem of the extent to which replacement should be controlled,

usually in terms of the size (length or tonnage) of the new vessel. Unless there are major overriding considerations, it would seem logical to allow licence holders to replace vessels in limited entry fisheries at their own discretion. Only if there is a major policy change to be implemented, e.g., separating catching and processing ownership, or if there is considerable excess catching capacity, should replacement not be automatic.

The part of the question relating to control of fishing effort is rather complex. At present, where replacement guidelines exist in Atlantic licensing, two principal types of control are exercised. The first is based on allowing a percentage increase in length of the new vessel; the second is based on permitting replacement on an equivalent tonnage basis. The purpose of both is to keep increase in fishing capacity or effort under some sort of control. Experience has shown that, even in cases where the number of fishing units is limited, fishing effectiveness can increase through larger and more efficient vessels being brought into the fishery. Coupled with increase in size, there is also the application of new technology, such as new fish finding devices, more powerful engines and winches and improved types of fishing gear.

In examining the present replacement criteria for control of fishing effort, we are faced with two opposite situations. The first relates primarily to the large offshore trawler fleet where present replacement guidelines for length increase do not allow certain vessel owners (especially of smaller trawlers) to acquire the proper size and

type of vessel to prosecute the improving fish stocks to the east and north. In some of these offshore groundfish situations, the proper vessel may exceed the length increase allowance by a very small amount. There are no doubt similar situations in other fisheries where or when expanding stocks or access to new stocks become available. Of course, the danger in such situations is that new larger vessels will continue to have licences to fish the old stocks and grounds and might result simply in adding too much capacity where it is not needed. It is possible that fishing plans may, in fact, have to force the diversion that was the rationale of allowing larger than normal increased sized vessels to be acquired.

The opposite type of replacement problem is evident in certain relatively small scale fisheries where the total catch is not expected to increase, if it all. In such cases, even the smallest size increases in new vessels will result in a situation where fewer and fewer vessels can be supported by the fishery as larger, more efficient and more costly vessels are brought in.

These types of replacement issues centre on the question of technological improvement and the extent to which it should be permitted or controlled. It now appears to be a fairly general situation that new larger vessels are more efficient but also more costly to obtain and operate. These vessels usually can catch more fish and must do so because of their higher cost structures. In any event, even if costs did not increase and the resource did not improve at the same rate as technological advance of the vessels, fewer new units will be required

to catch the available amount of fish. Indeed, in many situations maintaining fleet size, while bringing in new and more technically efficient vessels, will simply result in preventing the full benefits of technological improvement from being achieved.

Therefore, replacement guidelines should not be overly rigid and not the same for all fisheries, even on a relative basis. A balance must be struck between permitting technological increase but controlling it so that it does not get out of hand. The management objective for each fishery must take active account of the technological and associated economic and biological consequences of vessel replacement allowances. A range of situations can be envisaged from the case where uncontrolled technological improvement by replacement is permitted but fleet size reduced accordingly, through that where controlled improvement is allowed with some concurrent restriction of new vessels on adjacent grounds, to that where no technological advancement is allowed so that present fleet size can be maintained or increased.

It is obviously impossible to spell out appropriate replacement guidelines or criteria for the many and varied Atlantic Coast fisheries. This can only be done by an effective administrative and consultation system that takes local or individual fishery conditions into account. The guiding principal that must be applied is the degree of technological advancement that a fishery needs or can support in the light of clearly defined management objectives.

D. Licence Utilization Criteria

Some fishermen who hold a privilege in a limited entry fishery do not, for one reason or another, exercise that privilege each year. Most of these fishermen have this privilege because they were engaged in that fishery when restrictions were imposed. Since other fishermen would like to participate in these restricted fisheries, the question arises as to whether the government should impose a participation clause or utilization criteria on the holders of such privileges. If the answer is in the affirmative, what should be the criteria?

This question was discussed by most of the groups consulted. The general opinion seems to be that individuals or corporations should not be allowed to "sit on" such privileges indefinitely because there are many wishing to enter the fisheries but who cannot obtain the required licences. It was also pointed out that the establishment of utilization criteria or the introduction of a participation clause could force a person to invest capital and to fish just for the sake of retaining his privilege. This, in turn, could have the effect of increasing effort in fisheries when additional effort might not be warranted.

It appears that, in order to hasten the process of attrition where necessary, and to effect the redistribution of privileges, again where necessary, the limited entry privilege should contain a participation clause. It is recognized, however, that such a clause could have undesirable effects but that these would be limited. A participation clause now exists in the herring, crab, shrimp and lobster fisheries in some areas and should be extended to other restricted fisheries.

The participation clause should be defined in terms of quantity of fish or shellfish landed during a year, the value of such landings, the length of time engaged in the fishery, the number of trips made during the year, or a combination of the above.

It is desirable, therefore, that utilization criteria be established and that they be defined in consultation with the fishing industry in each Region, fishery or area. In the offshore fishery, the criteria would have to be uniform for the Atlantic Coast as a whole, but, in the inshore sector, they should be made flexible enough to meet local situations.

There was also discussion of the periods for which licences, privileges or registrations should be issued. Some groups felt that they should be valid for as much as five years to protect investment, allow for planning and to diminish uncertainty. Others felt that the present system of issuing those instruments of control on an annual basis should be retained in order to maintain effective entry control in those fisheries where it is deemed necessary. They also felt that, while there may not be a legal obligation upon government to renew a licence or privilege annually, there was a moral commitment to do so. There seems to be valid argument for retaining the principle of renewing the limited entry privileges and the personal fishing licences on an annual basis. The registration data should be required periodically (3-5 years) although a vessel registration certificate should be issued annually.

The question of suspension or cancellation of a licence or privilege for cause was often raised with the utilization problem. Generally speaking, there was agreement that licences or privileges should be suspended or cancelled for infractions of the regulations. It is not possible to recommend that any or all of the instruments of control (the personal fishing licence, the registration certificate or the privilege of entry in a restricted fishery) should be suspended or cancelled. There should be flexibility in this matter and each case should be decided on its own merits.

E. Diversification in Fishing Operations

The stocks of many species have declined, some of them seriously, during the past decade resulting in the need to severely restrict fishing operations in most areas. Coupled with this, most fisheries are now subject to limited entry. Because of these factors, many of those engaged in primary fishing operations complain that there is little room for expansion and that it is difficult to make a reasonable living. This seems to hold especially true in areas which are ice-bound for three to four months of the year, namely, the Gulf of St. Lawrence and the northeast coast of Newfoundland.

The view was quite widely expressed during the consultations that a greater degree of diversification should be permitted, particularly in the inshore fisheries. There was no consensus, however, as to the degree of diversification that should be allowed.

There can be agreement in principle with diversification as it would tend to make fishing operations more economically viable. If it is to be permitted, even on a limited basis or in certain areas, consideration would have to be given to the state of the fisheries resources in a given area and the number of participants currently operating. It is evident that in some fisheries, such as lobsters, that the availability of the resource would not allow for expansion and that there are too many participants in some instances.

An approach might be to allow some diversification in certain rather limited areas. Northumberland Strait, the Bay of Chaleur and certain of the large bays of Newfoundland might be cases in point. This might be done after full consultation on an area basis between government and the local fishermen at which time the state of the local resource and number of participants would be considered and guidelines or criteria established to effect the degree of diversification which might be permitted.

F. Licence Splits

The term "licence splits" generally refers to the case where more than one limited entry privilege is held and the holder wishes to use a separate vessel or vessels for one or more of these licences. The general effect would be that more vessels would be operating, overall, in the fishing fleet than previously. The current policy on the Atlantic Coast is to restrict the splitting of privileges held by the owner of a single vessel. The rationale for this prohibition has been to maintain

effort in specific fisheries at the present level given the present state of the resource and the economic situation of the units involved. The prohibition on splitting licences is also a hedge against over-capitalization particularly in those instances where the fishery for a particular species is very seasonal.

During consultations, the views expressed on this element of licensing were mixed; some in favour, some opposed. A number of fishermen felt that, with adequate participation clauses, licence splits do not become an issue because an unutilized privilege would revert to the licensing authority for redistribution if the state of the resource so determined, or for cancellation.

There are a few instances in which licence splits might be permitted. However, as a general rule, the present policy of no splits is favoured. Instances where splits might be permitted would require consideration on an individual basis. Splits should not increase capitalization and should not result in additional pressure being exerted on a particular resource unless it is judged that the resource can stand additional participation. If splits in privileges are permitted, such action should only be contemplated if increased diversification results and if the net benefit, by permitting the split, lessens exploitation on over-utilized resources.

G. Reserved Licences

One of the most controversial topics in Atlantic Coast licensing at this time is the reserved list of offshore groundfish licences which was created following the licensing policy announcement of November, 1973. This list of reserved groundfish licences was developed through the Offshore Groundfish Advisory Committee (OGAC). Under the definition of "the existing groundfish fleet" adopted by that Committee, licences were placed in reserve for vessels that had been removed from the Atlantic Coast groundfish fishery between August 13, 1968 and August 13, 1973 (the date of licence freeze). Initially, such licences had to, or could be activated within five years of the date the vessel was removed from the fishery. This period was extended to fifteen years during the groundfish industry crisis of 1975-76. While this list of licences for vessels removed in the five years prior to August 13, 1973, causes the most controversy, there is also a second type of reserved licence created under the OGAC Replacement Guidelines. Vessels removed from the Atlantic Coast groundfish fishery between August 14, 1973 and June 1, 1975 may be replaced within ten years of the date of removal provided the licensing authority is notified within sixty days of the vessel's removal and the licence is renewed annually.

While initially, replacement of active vessels or activation of reserved licences was at the discretion of the holders, the freeze on reserved licences of June 16, 1976 and the Ministerial procedure of approving all licence applications for vessels over 65 feet have changed this situation. Indeed, these two measures have effectively removed the

options granted under the OGAC guidelines and, in some quarters, have caused as much dissatisfaction as the existence of the reserved list has in others. This section will attempt to deal with both issues and the concept of reserving licences in general.

The initial establishment of reserved licences by OGAC was based primarily on the normal procedure of extending eligibility to those engaged in a fishery during some base period prior to licence limitation. In practically all other limited entry fisheries, this retroactive qualification resulted in active current units receiving licences. Because most limited entry fisheries are carried on by small-scale or single-vessel enterprises, the question of unused limited entry licences arising from the base period criteria was never important at the start of such programs. However, the offshore groundfish fishery is characterized by large scale and costly multi-vessel enterprises, thereby making immediate use of all eligible licences neither a practical nor financially feasible possibility. Consequently, the concept of reserved licences was introduced to the Atlantic licensing program. It was entirely in keeping with licensing procedure up to that time.

Holders of such reserved licences argue for their retention for future planning purposes or, failing that, for compensation if these licences are abolished. The form of compensation envisaged is not clear. However, some holders of these reserved licences feel that it is unrealistic to expect wholesale unfreezing over the short or medium term.

Another view from the same quarter is that holders of such licences cannot expect utilization to be permitted unless new entrants have a corresponding opportunity to acquire groundfish licences (as resource conditions permit). Other supporters of the reserved list argue that it represents a geographical distribution of fishing capacity that should be re-established by activating some of the licences on the list, maybe even in the form of equivalent units of smaller vessels.

On the other hand, detractors of the reserved list advocate its abolishment for the following reasons:

- (1) The reserved list prevents people who do not have licences now from obtaining them, as long as there is an obligation to honour the reserve;
- (2) It represents a geographic and corporate distribution of fishing capacity which may have been valid ten to fifteen years ago, but is no longer;
- (3) Vessels which were removed from the fishery prior to August 13, 1968, should also be eligible for reserved licences;
- (4) Some vessels for which licences were reserved had already actually been replaced but were still in existence on the Atlantic Coast during the five year base period;
- (5) Every offshore groundfish operator had an equal opportunity to replace or acquire vessels up to August 13, 1973, but not thereafter. In this

context, the reserved list gives only certain operators a right which everyone had prior to that date.

A solution to this issue is not an easy one, if in fact there is a total solution. Creation of the reserved list has caused undue expectations among those who have such licences. Government has sanctioned the procedure through OGAC. On the other hand, a truly dynamic futuristic offshore groundfish licensing program will be hampered by adherence to these reserved licences. However, because of certain action by government in this respect, it would seem ill-advised to abolish the reserved list at this time.

In view of the factors involved, the following might be an appropriate procedure for administering unrestricted groundfish licences for vessels over sixty-five feet:

(1) Leave the existing reserve licence list intact and continue the freeze of June 16, 1976. Extend the freeze to cover all vessels removed from the fishery since August 14, 1973 until a year prior to announcing that policy measure. Under this arrangement, we do not penalize an owner who lost or removed a vessel from the fishery in the twelve months prior to the announcement of the extension of the freeze. Measures to replace vessels removed in this "year of grace" must be finalized within two years of the announcement date or such licences will become invalid.

(2) Until 1985, or such later date as resource conditions dictate, approve only replacement of active licensed groundfish vessels.

(3) When the process of (2) is complete, then turn to activation of licences reserved for vessels removed after August 13, 1973.

(4) If resource conditions still permit additional vessels after the process of (3) is finished, activation of the licences reserved for vessels removed prior to August 13, 1973 could be undertaken.

(5) Any approvals under (3) and (4) should be decided on the merits of each case. Factors such as previous history in the industry, available resource, raw material supply situation, distribution of catching capacity, and type of vessel proposed would be all taken into account. In other words, all vessel replacements over and above the current active fleet would have to be justified individually with the reserved licence list being only a guide to previous participation or dependence on offshore capacity.

(6) Clear time limits for replacements of existing licenced vessels should be set. These limits should be not more than three years and require concrete commitment for replacement being made within not more than one year from the time the vessel was removed from the fishery.

The above arrangement could handle the problem of the reserved list over the short to middle term. However, if the resource situation did not allow replacements of all active vessels and those removed after August 13, 1973, the attachment to the original list would still remain. It might also be advisable, while following the above priority on replacements, that holders of "pre-1973" reserved licences be consulted

with a view of cancelling out this list in favour of a more dynamic structure for the future.

Following from all the above, is the obvious conclusion that reserved lists of licences should not be created in the future for any limited entry fisheries. Such arrangements tie the licensing program to a past pattern that may not be appropriate for the future. The degree of rigidity, of course, varies with the time period allowed for acquiring vessels for the reserved licences.

Some people consider reserved licences a form of licence bank. In fact, it may, by strictest definition, be the most perfect form of licence bank because the holdings are identified in the original owner's name. Two other views of licence banks are the following: a repository for all licences cancelled or withdrawn from a limited fishery and held for possible further reallocation; and a simple listing of interested or eligible applications for licences in a particular fishery, if these should become available.

In a fully effective licensing system, no real need is seen for licence banks either where existing licences are held or names of applicants are filed. Licence utilization criteria will keep all issued licences in active use. Proper evaluation procedures will provide a guide to the number of licences that should be active in a fishery at any time. An effective consultative system and categorization of fishermen will make licensing of new entrants a fairly straight forward process. The licensing authority, in any event, can create or cancel licences at any time. The idea of banking licences usually gives the impression that the original limited number is the correct one. Of course, banking or reserving licences in the name of the original holder is an even more rigid arrangement.

H. The Ownership Issue

While the issuance of the privilege to use a fishing vessel in a particular fishing activity or activities is of fundamental importance, a good deal of import must be attached to the question of the ownership composition of the fishing fleet. If it is desired to avoid monopolistic practices in the primary sector of the fishing industry in the future, this matter must be addressed. There is obviously a fundamental right in this country to own property including fishing vessels. There is not, however, a fundamental right to engage in fishing since the authorization to do so is granted by the state and direct control on ownership can be exercised through licensing.

Because control can be exercised through ownership, because a concentration of ownership may lead to price leadership in the primary sector and, because fishing privileges have been issued to owners of fishing vessels, it became evident during the consultations that the ownership question is high in the minds of many.

The fishermen, of course, support the principle of ownership by fishermen, particularly for inshore vessels but, in the case of larger vessels, they recognize this would be difficult in the short term. On the other hand, many of them see no reason why fish buyers and processors should not be permitted to own vessels, especially in the offshore sector. It became evident that most fishermen found it difficult to conceive the reality of owning large vessels (over 35 metres in length) for the following reasons:

- (a) the large capital outlay involved,
- (b) the crewing, maintenance, operational and general management problems,
- (c) the uncertainty as to the economic viability of large vessels, and
- (d) the fact that return on investment appears to be higher in most non-fishing sectors of the economy.

A few fishermen are obviously interested in obtaining large fishing craft and some buyers and processors would obviously be pleased to divest themselves of large vessel operation if they could be certain of continuous supplies to processing establishments. To involve a significant number of fishermen in the ownership of large vessels would, however, require the establishment of a fund to facilitate the acquisition of sufficient capital.

The buyers and processors argue that they require some ownership of fishing vessels, especially in the offshore fisheries, if they are to be guaranteed a supply of raw material to their processing plants and if there is to be an increase in overall efficiency in the industry through improved coordination of the harvesting, processing and marketing activities. This argument appears to have some validity and is especially applicable during periods of reduced activity in the inshore fisheries due to ice problems, severe weather conditions and stock migrations. Otherwise, serious supply problems at certain periods of the year could adversely affect processing plants and whole communities which depend upon them.

The Norwegians, for example, strongly encourage ownership of fishing vessels by fishermen or their organizations and subsidize their industry heavily. On the other hand, they also permit ownership by fish buying and processing corporations in recognition of the supply of raw material problem. They do, however, have a different pricing structure dockside in that prices are negotiated twice annually or set by government if negotiations fail.

Thought has been given in several circles to the formation of a consortium or fishing corporation of the federal and provincial governments, fish buyers and processors and fishermen's organizations which would own some part of the fishing fleet, especially in the offshore fisheries. The Corporation could be issued the appropriate licences and would manage the vessels and direct where they sell their catches or might dispose of catches by auction to the highest bidder. This proposal has some interesting possibilities in that it might constitute an interim measure or even an alternative in dealing with the ownership question.

In summary, it appears that matters relating to the ownership issue involve the following:

- (a) The ownership of particular units within the fishing fleet can be controlled effectively through a licensing program wherein free transfers are not permitted and there is control as to who is permitted to licence additional units in the future.

- (b) When fishing vessels owned by buyers and processors require replacement, the first right of refusal could go to the independent fishermen to acquire the replacement vessel and the authority (licence) to operate it.
- (c) When a vessel is repossessed or sold, all relevant fishing privileges under which that vessel was used would revert to the licensing authority.
- (d) Any program involving ownership of large vessels by fishermen is a long term one and there is need to establish a financial institution or fund to assist fishermen to this end.
- (e) Fish buyers and processors require ownership of large offshore trawlers to insure supply of raw material, especially during slack inshore periods, to their plants.

I. The Freezer Trawler and Factory Freezer Trawler Issue

The deployment of Canadian freezer trawlers and factory freezer trawlers within our zone of extended jurisdiction was raised with the task force on several occasions during the consultations. As would be expected, no clear consensus emerged. Arguments for and against these vessels were advanced with those opposed voicing opinion that they would detract from employment ashore and utilize migratory species and stocks which should, in some part at least, become available to inshore

fishermen. Proponents of these vessels argued that their use could improve quality of landed product, especially from the more northern areas and be of benefit in alleviating the shortage of raw material at certain plants during the off season.

In summary, it can be stated that:

(1) The factory freezer trawler issue is a controversial one in Atlantic Canada. The inshore fishermen and some buyers and processors are strongly opposed to their introduction. The fear amongst many groups is that introduction of factory vessels will create unnecessary competition for some traditional species of fish and have adverse effects on employment ashore. No strong arguments were presented for cases where factory vessels are absolutely necessary. Therefore, this problem does not require resolution on an urgent basis but does require rather long-term consideration and, as such, should be studied in-depth by the Department.

(2) Freezer trawlers are a necessary adjunct to the Canadian fleet to prosecute certain more distant fisheries or some non or under-utilized species where initial preservation at sea is required. Until such time as improved resource conditions permit additional fishing units, the acquisition of freezer trawlers should be allowed through replacement or conversion of existing licenced and active vessels, subject to guidelines established by the Atlantic Groundfish Advisory Committee.

(3) In the context of the non or under-utilized species where proposals are received for vessels, either freezer or factory trawlers, to fish only these species, there appears to be no valid reason for refusal to licence such vessels on the clear understanding that they are licenced to fish only such species and are fully Canadian owned and crewed. Under

this arrangement, owners of existing vessels not now licenced for offshore trawling could be authorized to fish only for specified non or under-utilized offshore species in addition to present licensed activities.

J. Professional Status for Fishermen

The question of creating a professional status for fishermen, through appropriate licensing policies, was one of the prime terms of reference for the licensing study.

During the consultative process, it was clear that fishermen were opposed to having professionalism legislated upon them or having governments establish criteria defining professionalism without full consultation. It was evident, however, that some organizations and one province have established or are in the process of establishing a professional category through basic criteria.

Although fishermen in general seemed to feel that the professional status was not something directly requiring government involvement (since professionalism might be described as a "state of mind" and something of direct concern to associations or unions) there was general agreement that a classification system for personal fishermen's licences could be instituted to aid in determining the eligibility of those currently in the fishery in acquiring new or additional fishing privileges.

There are many factors which might be considered in establishing such a system for the personal licences. These are time involved in the primary sector, proportion of income acquired from the fishery, and dependence upon the resource for an individual's livelihood. The major difficulty which has defied definition to this point in time is the category of the bona-fide fisherman and, conversely, that of the so-called "moonlighter". It is obvious that the definition of the bona-fide fisherman varies with locality, resource base and dependence, alternative employment opportunity and level of fishermen's organization.

It would appear that only after further consultation with fishermen, that criteria for a classification or categorization system should be established. This might involve a classification system which would sub-divide the personal licences into three categories. One category might cover those dependent upon the fishery resource for a substantial proportion of their annual livelihood. A second category might refer to apprentice fishermen who are learning the trade through fishing experience and, perhaps, through training establishments. The third category might be reserved for the casual fishermen or the marine sports fishermen.

K. Licence Fees

The fees for licences on the Atlantic Coast are currently very low and bear little relation to the catching capability of the various fishing units, nor do they cover costs of printing, distribution and issue.

There are also inequities in the fees charged. For example, the owner/operator of a forty foot vessel, engaged in more than one limited entry fishery, is charged as much for his licences and entry permit as the owner of a large offshore trawler.

It was generally agreed by all consulted that the fees should at least cover administrative costs and that steps should be taken to eliminate the inequities in the fee structure.

The current cost of the domestic Atlantic licensing system administered by federal officials approximates 1.3 million dollars (forms, licensing staff, computer time, fishery officers time, postage, etc). The current revenue from the system does not exceed 0.4 million dollars.

The fee structure for the Atlantic Coast fishery should, at the very least, cover total administrative costs. As an element in any fee increase it is apparent that those holding or acquiring privileges in limited entry fisheries should pay relatively higher fees than those in open entry fisheries, in recognition of the special privilege of participating in limited fisheries. In these fisheries, there should be an annual fee for permission to use a vessel in each limited entry fishery, based upon gross tonnage. There should also be a charge for the vessel registration although it is felt this should be nominal and uniform. The fee for personal licences can probably remain unchanged.

The issue of charging a fee for sport fishing in tidal waters of Atlantic Canada was raised by several of the groups consulted, with a recommendation that non-Canadians pay a substantial fee. This should be the subject of a separate study by the Department.

The precise recommendations as to fees will be dealt with later in this report. (See Chapter 8.)

There was also discussion on the question of charging resource rent or royalty for use of the fisheries resource which, after all, is maintained at substantial public expense. It can be concluded, that with minor exceptions, e.g., the Bay of Fundy herring purse seine fishery, that those engaged in the primary sector of the fishing industry are not ready, financially or physiologically, for such a dramatic step.

CHAPTER 7

AN ADMINISTRATIVE FRAMEWORK FOR LICENSING

During the course of the consultations, the task force encountered a good deal of unhappiness with the administration of the licensing system. It should be made clear here that this unhappiness was not with the public servants responsible for administration. Rather, it was with the system itself, which most elements of the fishing industry feel has become overburdened, cumbersome, inconsistent in application and unresponsive. The specific complaints expressed were:

- (a) too much paperwork and "red-tape" are involved;
- (b) licence transactions are not made public;
- (c) there are undue delays in decisions dealing with applications for transfers of licences and replacement of vessels;
- (d) inappropriate decisions are made on allocation of licences (that is, who gets licences and, conversely, who does not);
- (e) changes are made in licensing policy without adequate consultation and often without due notification;
- (f) there are inconsistencies, sometimes major in nature, by Region and within Regions in interpretation and application of licensing policies and related regulations; and
- (g) the licences themselves are not made from sufficiently durable material;

Much discussion centred on the decision making process for issuing of additional licences when they become available and the handling of licence appeals. Majority opinion was expressed to the effect that decisions in such matters should not be made at the public service or political levels, although there were some who felt these decisions to be the responsibility of the bureaucrats and the Minister. During the two rounds of consultations, majority agreement in principle emerged for the establishment of licensing boards or committees, perhaps several in each region, which would have well-defined powers to deal with the issuance of licences and in ruling of licence appeals. Precisely what the powers should be, however, became the subject of disagreement. Essentially, three points of view came to the fore:

- (i) the boards or committees should have the power to make final decisions on allocation of new licences and in dealing with licence appeals; when a decision was reached, the public servants would issue the licence;
- (ii) the boards or committees should make recommendations only as to the issue of new licences and in dealing with appeals; the public servants and/or the Minister would then make the final decisions;
- (iii) the boards or committees should perform an advisory role only in establishing criteria or guidelines for allocating licences and administering appeals.

The membership of the boards or committees was also the subject of debate. Some held that the members should all be fishermen with, perhaps, a public servant as non-voting chairman. Others felt that the membership should be drawn from fishermen's organizations, fish buyers and processors groups and from the federal and provincial public services. Finally, there were those who held the point of view that the members should be individuals having no association with governments or with the fishing industry, i.e., completely independent people.

The method of appointing members to the boards or committees was also discussed. Some thought that Order-in-Council appointments would be appropriate, giving the boards commission status. The majority, however, agreed that letters from the Minister or even Regional Directors-General would suffice.

Given the complaints which were strongly voiced about delays in the decision-making process, cumbersome procedures and "red-tape" in the present licensing system, one might wonder about the ability of boards or committees to respond quickly to matters placed before them and to avoid cumbersome procedures. Quite apart from these considerations, there is the problem of fishermen and fish buyers and processors on such boards being able to attend during the busy spring, summer and fall months. This problem is significant even in setting up meetings of fisheries commissions and fisheries advisory groups today. One might also speculate what the role of government is in licensing matters if the boards are given decision making powers.

If the board or committee approach were to be adopted, there would have to be careful structuring and well-defined terms of reference. It would also be wise in so doing to bear in mind the adage that "a camel is a horse which was designed by a committee". This is not to suggest that boards or committees are incapable of making sound decisions or recommendations; some perform notably well, others are somewhat less successful.

Currently, there are twenty-six fisheries advisory committees in operation in the Atlantic Provinces, apart from Quebec. This does not include a number of licence appeal committees. The advisory groups are primarily concerned with fisheries management matters though a few, as part of their function, deal with licensing matters. If it were decided to superimpose upon this existing structure, perhaps as many as fifteen committees dealing only with licensing, the results would be chaotic. Licensing decisions or recommendations cannot be arrived at in a vacuum. They must be based upon such considerations as:

- (a) state of the stocks;
- (b) numbers of participants;
- (c) present levels and types of effort;
- (d) numbers and composition of the fleet;
- (e) technological and fleet development;
- (f) costs and revenues from fishing; and
- (g) conditions in the market place.

One approach might be to restructure the existing committee arrangement by establishing area committees, perhaps fifteen or twenty in number, and giving them terms of reference to make recommendations dealing

with fisheries management matters as well as with licensing matters in their respective geographic areas of concern. Even this should be approached with caution. Obviously, this is a complicated problem and one which, given the time constraints, did not permit the task force to consider in full detail. It is something which might more properly be studied in greater depth by the Department.

Another approach might be to establish one area committee on a "pilot" basis, preferably in Newfoundland where substantial thought appears to have been given to this type of approach. This committee, to be composed of fishermen, buyers and processors with federal and provincial representation might be given authority to recommend on inshore fisheries management matters, licensing criteria, allocation of new inshore licences and limited transfers.

In the meantime, the Department must continue to carry out its responsibilities for licensing in the remainder of Atlantic Canada but looking to hastening the decision-making process, clarifying policies, cleaning up regulations, eliminating "red-tape" and developing better consultative and notification methods in advancing policy changes.

It is also necessary to establish in Ottawa headquarters, a full time position of Atlantic licensing co-ordinator. This individual would take the lead in implementing a new system and in ensuring a uniform interpretation and application of licensing policies.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

Earlier in this report, attention was drawn to a number of shortcomings in the present licensing system and to certain other problems which were brought to the attention of the task force. These were discussed in some detail in Chapters 5, 6 and 7. The recommendations which follow are aimed at laying the groundwork for a new licensing scheme. Some of them deal with principles which should be followed in implementing any new system; others are concerned with some of the details of implementation. It will become obvious to the readers that the report remains silent on the application of recommendations to individual fisheries. The time constraints involved simply did not permit a study and reporting in such a detailed manner.

1. Limited-entry Fisheries

Given the current state of the fisheries resource and the projections to 1985, it is readily apparent that allowing additional entrants to the fleet would endanger the economic viability of existing operations and make the already difficult task of the fishery managers more difficult. It is recommended that limitation of entry be maintained in those Atlantic Coast fisheries where it is now in place and that expansion in those fisheries take place only as the overall situation permits. It is also recommended that in every limited entry fishery there be control of the amount and/or size of the gear fished.

2. Personal/Corporate Licence Versus Vessel Licence

The type of licence used to effect management control is of paramount importance in a licensing program. The pros and cons of

licensing individuals and corporations as opposed to vessels have been considered at length. It is recommended that in all Atlantic Coast fisheries, licensing take the form of a licence issued to the eligible owner (individual or corporation), or lessee in the case of a leased vessel, to use a specified registered fishing unit in a specified type or types of fishing activity. This document would be used in limited entry fisheries and other fisheries where specific identification of participants is required.

3. Vessel Registration

The licence to fish must be coupled with a simple universal registration of all commercial fishing vessels. It is recommended that there be a simple registration of all commercial fishing units. This should be renewed annually. Details of vessel characteristics should be obtained only every three to five years, instead of yearly as is now the case.

4. Personal Licences

The question of developing professional status for fishermen or categorizing fishermen was a major term of reference of the study. It was thoroughly discussed during the consultations and seems worthy of consideration. It is accordingly recommended that provision be made in the licensing system for the issue of categorized personal fishing licences which would provide for differentiation of regular fishermen, apprentices/learners and casual fishermen. It is further recommended that the categories to be established, together with the applicable

criteria, be developed in close consultation between the federal and provincial governments and participants in the fishing industry.

5. Transferability of Licences

There are substantial arguments for and against permitting open transfer of licences. It must be recognized, however, that it is highly questionable practice to permit profit from the sale of a privilege granted by the state. Quite apart from this consideration is the fact that speculation in licences constitutes one element of over-capitalization. More importantly, if some control over ownership is to be exercised, open transfer simply cannot be permitted.

It is therefore recommended that free or open transfers of licences not be permitted. Limited transfers, to allow continuation of existing enterprises by other members of those enterprises, should be permitted through the licensing authority. Otherwise, effective the date of implementation, licence holders wishing to leave the fishery should be required to relinquish their licences to the licensing authority who will determine the ultimate disposition.

It is also recommended that guidelines for controlled or limited transfers be developed for each limited entry fishery through an appropriate consultative process.

6. Vessel Replacement Criteria

Vessel replacement criteria are relevant only in limited entry fisheries and are not a factor in open fisheries.

There is a continuing requirement to replace older vessels in both the inshore and offshore fleets and to redefine criteria under

which such replacements are permitted. Licence holders should be free to decide when to replace active vessels provided it is done within guidelines in respect of vessel size and established time periods.

It is recommended that criteria for vessel replacement in limited entry fisheries be redefined or established in consultation between government and users of the resource and that such criteria focus on catching capability and economic returns in each fishery.

7. Licence Utilization Criteria

Licence utilization criteria, which might more properly be termed participation requirements, are a necessary element of licensing in limited entry fisheries. They can be useful in hastening the process of attrition where required and to effect redistribution of privileges where this is deemed necessary.

It is recommended that participation requirements be defined for all limited entry fisheries, again in consultation between government and users of the resource, and that they be flexible enough to meet Regional or even area requirements. In the offshore fisheries, the criteria should be uniform for the Atlantic Coast.

8. Diversification in Fishing Operations

Diversification can be agreed to in principle because it can make fishing operations more economically viable; on the other hand, it can create certain problems for the resource managers. Even if permitted on a limited basis, the state of the fisheries resource, the current

catching capacity and levels of earnings in a given area must be considered together.

It is recommended that, in consultation between government and local resource users, areas be defined in which diversification might be permitted and that guidelines or criteria applicable to each area be established to determine the degree to which diversification will be permitted.

9. Licence Splits

The term "licence splits" refers to the case where more than one limited entry privilege is held and where the holder wishes to use a separate vessel or vessels for one or more of these licences. If permitted, such splits would have the effect of putting additional units into limited entry fisheries.

It is recommended that applications for licence splits be considered on an individual basis and that they be permitted only where the resource can stand additional exploitation and where net benefit results from lessening exploitation on over-utilized species.

10. Reserved Licences and Licence Banks

The creation of the reserved groundfish licences under OGAC has become one of the most controversial issues in Atlantic Coast licensing. Further, actions by government in creating and sanctioning this reserve constitute, in the very least, a strong moral obligation or commitment to the licence holders involved. It is not advisable to abolish the reserve at this time. Accordingly, it is recommended that the following procedure for administering unrestricted groundfish licences for vessels over sixty-five feet be adopted:

(1) Leave the existing reserve licence list intact and continue the freeze of June 16, 1976. Extend the freeze to cover all vessels removed from the fishery since August 14, 1973 until a year prior to the announcement of this extension. Under this arrangement, we do not penalize an owner who lost or removed a vessel from the fishery in the twelve months prior to the announcement of the extension of the freeze. Measures to replace vessels removed in this "year of grace" must be finalized within two years of the announcement date or such licences will become invalid.

(2) Until 1985, or such later date as resource conditions dictate, approve only replacement of active licensed groundfish vessels.

(3) When the process of (2) is complete, then turn to activation of licences reserved for vessels removed after August 13, 1973.

(4) If resource conditions still permit additional vessels after the process of (3) is finished, activation of the licences reserved for vessels removed prior to August 13, 1973 could be undertaken.

(5) Any approvals under (3) and (4) should be decided on the merits of each case. Factors such as previous history in the industry, available resource, raw material supply situation, distribution of catching capacity and type of vessel proposed would be all taken into account. In other words, all vessel replacements over and above the current active fleet would have to be justified individually with the reserved licence list being only a guide to previous participation or dependence on offshore capacity.

(6) Clear time limits for replacements of existing licensed vessels should be set. These limits should be not more than three years

and require concrete commitment for replacement being made within not more than one year from the time the vessel was removed from the fishery.

Further, because of the problems which can arise with reserving of limited entry licences, it is recommended that no reserved licences be created in the future.

In addition, it is also recommended that the use of licence banks be avoided. Effective licence utilization criteria, proper evaluation procedures and criteria for new entrants preclude the need for licence banks.

11. Fishing Vessel Ownership

Fishermen support the principle of ownership of the fishing fleet by fishermen, though many of them see no reason why buyers and processors should not be permitted to own vessels, especially in the offshore sector. Most fishermen also find it difficult to conceive the reality of owning larger vessels (over 100 gross tons) because of the high capital costs involved, general operational and maintenance problems and the fear of low returns on investment. The buyers and processors appear to have a valid claim for ownership of some fishing vessels, especially in the offshore fisheries, if they are to be assured of a supply of raw material and if there is to be an increase in overall efficiency through improved co-ordination of harvesting, processing and marketing activities. At the present time, 90% of the vessels over 100 gross tons are owned by fish buying and processing corporations. Those vessels between 50 and 100 gross tons are 80% fishermen owned. Vessels less than 50 gross tons are virtually all owned by fishermen. It is impossible to determine what percentage of the fishermen owned vessels are under debt arrangements with fish buying and processing corporations.

Ownership of particular units within the fishing fleet can, of course, be controlled through a licensing program where free transfers are not permitted and where there is control as to who is permitted to licence additional units in the future.

Obviously, the area in which to commence a program of change of ownership of the fishing fleet is in the smaller vessel categories (under 100 gross tons). With this in mind, it is recommended that when vessels under 100 gross tons owned by fish buying corporations are sold or are being replaced, the first right of refusal for the licence go to independent fishermen and that there be a fixed time period for exercise of this option. Should the option not be exercised, the licence should be retained by the original holder who must then abide by the relevant replacement guidelines as to time period and vessel size.

This same procedure might also be accomplished by setting a vessel age at which the option must be made available or by putting a life (time period) on existing licences, at the end of which, such an option would be made available. Should implementation of this recommendation achieve the intended result, it might then be applied to larger vessels.

It is further recommended that when any vessel is repossessed, all relevant fishing privileges held by the owner revert to the licensing authority and, here again, that independent fishermen be given first right of refusal within a specified time period to take up these privileges.

The extent to which ownership of larger fishing vessels can be attained will depend primarily on suitable financing arrangements being available. With or without such financing arrangements, the licensing system can only make it possible for change in ownership to occur, it cannot cause it to happen.

In the offshore fisheries, fish buyers and processors will need some catching capacity to ensure their source of raw material supply. It is recommended that in the offshore fisheries, buyers and processors continue to be permitted to hold licences until it becomes possible to acquire supplies from other sources.

12. The Freezer Trawler and Factory Freezer Trawler Issue

The factory freezer trawler issue is a controversial one on the Atlantic Coast with the inshore fishermen and even some buyers and processors opposed to their introduction in traditional fisheries. No strong arguments were presented to the task force for cases where these vessels are necessary. It appears, therefore, that this problem does not require resolution on an urgent basis.

It is recommended that the factory freezer trawler issue be studied at greater depth by the Department before a decision is made on their introduction to traditional fisheries.

Freezer trawlers are a necessary adjunct to the Canadian fleet, especially in prosecution of more distant traditional fisheries and in taking non-utilized or under-utilized species where initial preservation at sea is required.

It is recommended that, until such time as resource conditions permit, acquisition of freezer trawlers be permitted only through replacement or conversion of existing licensed units, subject to guidelines established for offshore groundfish vessels.

There does not appear to be any valid reason to refuse licences to freezer or factory freezer trawlers that would be acquired to fish solely for non or under-utilized species. It is recommended that licences

for such vessels be favourably considered provided they are owned and crewed by Canadians.

13. Licence Fees

The current annual cost of administering the Atlantic domestic licensing system approximates 1.3 million dollars. Annual revenues from the system are only about one-third of this amount. It is felt that the licence fee structure should be such that it covers administrative costs. Further, it is felt, that those in limited entry fisheries should pay relatively higher fees than those in open fisheries because of the special privilege involved. The following fee structure, which will result in revenues approximating 1.3 million dollars annually is recommended:

- (a) In limited entry fisheries, an annual fee for the authority to operate should be charged at the rate of \$1.00 per gross ton for vessels 10 gross tons or larger. There should be a flat fee of \$10.00 for vessels less than 10 gross tons. These fees should apply to each limited entry fishery in which there is authorization to participate;
- (b) The fee for the annual fishing vessel registration for all vessels should be \$10.00, regardless of size;
- (c) The fee for a personal licence should be \$5.00;
- (d) The above fees should be reviewed annually.

It is also recommended that the issue of charging a fee for sport fishing in the tidal waters of Atlantic Canada be the subject of a separate study by the Department.

It is further recommended that the Atlantic Coast licensing system not be concerned with the collection of royalty or economic rent. If rent appears in the earnings from any fishery, it might be more appropriate to dissipate it by allowing new entrants into that fishery.

14. Administration of the Licensing System

Many of the criticisms directed at the present licensing structure could be overcome by an improved administrative framework. Such a framework should include more direct involvement by participants in the primary sector, a clearer and more uniform interpretation of policy, properly applied program evaluation procedures and more adequate information flows. The following recommendations are made to this end:

(a) That the present advisory committee system be restructured so that all limited entry fisheries are covered and licensing questions become a more central function of these committees;

(b) That consideration be given to testing the "total area fisheries" approach to licensing by establishing an area committee on a pilot project basis. This committee would cover all licensing and related fishery management issues in the selected area;

(c) That objectives be established for each limited entry fishery. The objectives should be based upon the particular situation in each fishery and could cover such things as the number of participants, level of earnings, distribution of licences and rehabilitation of the stocks;

(d) That each limited entry fishery be subject to effective evaluation procedures to ensure that fishery management objectives are being achieved especially in terms of appropriate fleet size;

(e) That policy changes in future be more clearly enunciated and that greater effort be made to fully inform those concerned. A restructured advisory committee system would greatly assist to this end;

(f) That regulations be established to implement all licensing policies and that licensing regulations for each limited entry fishery be consistent with overall regulations. Too many licensing policies have been adopted without promulgating back-up regulations. This has led to uncertainty and confusion among the clientele and those administering the system;

(g) That a list of limited entry privilege holders for each calendar year be published and that a listing of all licencees be available for public scrutiny;

(h) That a full time Atlantic licensing co-ordinator be appointed in Ottawa headquarters.

15. Other

During the course of the consultations, a number of issues related to licensing, to a greater or lesser degree, were identified. They are listed below and are recommended for appropriate consideration by the Department.

(a) The licensing policy and regulations for the Bay of Fundy herring weir fishery require an in-depth review to ascertain whether privileges held by non-fishing interests are causing hardship to those fishermen who are, or could be involved.

(b) In the Atlantic Coast herring fishery, regulations require that a vessel be replaced on a net ton for net ton basis. Given the current system of boat quotas, and the probable future increases in

herring allocations on Georges Bank, the regulations constitute a deterrent to modernization, safety at sea and diversification.

- (c) Fishermen who are or were engaged in the swordfish fishery should be restricted to those holding longline privileges and that this fishery should be regulated by an overall quota.
- (d) It is claimed that a viable longline fishery for halibut could be established on the Atlantic Coast provided an overall quota were established and otter trawlers were not permitted to retain halibut in their fishing activities for other groundfish.
- (e) Fishermen claim that the vessel subsidy program has distorted types of fishing craft that might be acquired and that benefits from the program accrue only to the shipyards. Some advocated the abolition of vessel subsidies. Others stated that subsidies should be available on a once in a lifetime basis or only to new entrants. Others felt that those holding more than one limited entry fishing privilege should not be eligible for subsidy.
- (f) If buy-backs are instituted for specific fisheries in future, the buy-back should be financed by those participating in the specific fishery to which the buy-back pertains.

APPENDICES

APPENDIX I

Examples of Restrictive or Limited Entry License Systems in Other Countries

<u>Fishery</u>	<u>Type of License</u>	<u>Transferability</u>	<u>Fees</u>	<u>Type of Control</u>
<u>AUSTRALIA</u>				
Western Australia Rock Lobster	Area vessel license	Free	Minimal for men and vessels, \$3.50 to \$4.00 (Australian) per pot	Limitation on number of vessels and pots limited to 3 per foot of boat length as of 1963. Fishing seasons are also set.
Western Australia Prawns	Area vessel license	Free	Shark Bay - \$1500. Exmouth Gulf - \$1250. Nichol Bay - \$200.	Limitation on number of vessels. No vessel can use more than two nets at one time. Closed seasons and areas are also used. Limited entry began in Shark Bay in 1963.
Northern Prawns (Cape Ford to Cape York)	Vessel license	Unknown	None	Entry limited as of 1977.
Southern Lobsters (Victoria, Tasmania and South Australia)	Vessel license endorsed by area	Unknown	None	Entry limited as of 1975.
Southern Australia Prawns	Vessel license endorsed by area	Unknown	None	Limitation on units.
Abalone in Victoria, South Australia, Tasmania and New South Wales	Personal license to divers (for specified zones in some cases)	Free in Tasmania, non-transferable in other areas.	\$200. to \$250.	Limited on number of divers as well as size and weight units on catch.

CHILE

Foreign Fishing Vessels	Vessel License	No	\$60. per net ton of vessel and \$20. per ton of catch	Restrictive in that numbers of vessels not absolutely limited.
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COLUMBIA

Foreign Fishing for cetaceans, tuna and live bait	Vessel License	No	100 to 200 pesos per registered ton for firms located in Columbia, 2,000 pesos for others.	Numbers not necessarily fixed. One year license for firms resident in Columbia, 30 days for others.
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COSTA RICA

Foreign Fishing for Tuna	Vessel License	No	\$30. for vessels up to 400 tons, \$60. for larger vessels.	60 day licenses. 50% reduction in fee if nets are not used. Free license extension if vessel sells 100 tons to domestic canneries. Foreign vessels chartered by Costa Rican companies are treated as nationals.
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ECUADOR

Foreign Fishing for other than Lobster or Shrimp	Vessel License	No	\$60. per net ton waived if 20% of catch sold in Ecuador.	Licenses not limited in number. Issued per trip (60 to 90 days)
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EL SALVADOR

Domestic Shrimp Fishing	Vessel license	Unknown	No license fee. Export tax 6%. Ad Valorem on Shrimp exports.	Number of licenses frozen in 1962 at 73.
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EL SALVADOR (cont'd.)

Foreign Fishing (shrimp and other species)	Vessel license	No	Not known but based on vessel net tonnage	Foreign vessels cannot fish inside 12 miles. Restrictive licensing, not limitation.
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EUROPEAN ECONOMIC COMMUNITY

North Sea and East Atlantic Groundfish, Mackerel, Sprat and Bluefin Tuna fisheries by Polish, GDR and USSR vessels.	Vessel license	No	None in 1977	Licenses initially limited to the following: Poland - 5 GDR - 6 USSR - 27
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Spanish, Finnish, Portuguese Flag Fishing Vessels.	Vessel license	No	Unknown	Maximum number of vessels and types set by zones and time periods.
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GUATEMALA

Foreign Fishing other than shrimp.	Vessel license	Unknown	\$40. for vessels under 50 tons. \$60. between 50 and 100 tons, \$160. greater than 100 tons.	Number of licenses not limited. Licenses issued for one year.
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ICELAND

Isafjardardjup and Huna Bay Shrimp	Vessel license	Unknown	Unknown	Licenses issued only to local fleets, restrictive rather than limited entry.
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ICELAND (cont'd.)

British Trawlers	Vessel license	Unknown	None	Licenses issued to 93 wetfish trawlers under Oslo Agreement.
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ISLE OF MAN

Herring within 12 mile limit	Vessel license	Unknown	None	Licenses limited to number in 1977 to 124 vessels, 100 British and 24 Irish.
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JAPAN

Coastal Fisheries	Various types (personal, gear or area)	No	None	Primarily local restrictions on Coastal fishing activities.
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Offshore Fisheries	Vessel license	Within certain limits	None	Limitation is on number of vessels and/or tonnage.
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Distant water Fisheries	Vessel license	Within certain limits	None	Number of vessels licensed is controlled by total number of licenses available or tonnage permitted.
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MEXICO

U.S. vessels within 12-200 miles off Mexico	Vessel license	Unknown	\$80. for permit and varying charge for catch	Vessel number limited by season. Catch is also controlled.
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U.S. Fishing in 12 mile zone off west coast	Vessel license	Only within specified limits, e.g. inheritance, father to son.	\$80. for permit plus fee per trip	Vessels limited in number to 141. Vessel removed from fishery cannot be replaced. Permit may be cancelled if vessel does not fish in a 12 month period.
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NETHERLANDS

Domestic shrimp

Vessel license

Unknown

License available to cutters only.

None

NEW ZEALAND

Fisheries named under Fisheries Amendment Act 1977 which, at that time, were scallops, rock lobster, paua, eels, mussels and oysters.

Vessel license

No

Unknown

Licensing programs to be developed as authorized by the Act.

NICARAGUA

U.S. Shrimp and Lobster Fishing Vessels

Vessel license

Unknown

Vessel tax based on \$10. per vessel under 16 ft. plus \$1. for each additional foot.

Licenses issued only to those who have or promise to establish plants in Nicaragua. Licenses are issued for 20 years with a ten year renewal possible.

NORWAY

All Fisheries

License to build fishing vessel

Unknown

Unknown

Scheme of controlling total inputs to fishing and also ownership of fishing fleets in line with Government policy on ownership.

PANAMA

Primarily shrimp by foreign vessels

Vessel license

Unknown

\$30. per net ton

Licenses issued for 6 month period.

PERU

Foreign Fishing except Anchovies	Vessel license	Unknown	\$20. per net ton	License issued for 100 days and vessel must have agent in Peru.
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SOUTH AFRICA

Domestic Pilchard and Maasbanker	Vessel license	Subject to replacement requirements of surrendering sufficient licensed tonnage to cover size of new vessel.	Varies by type of boat	Number of licenses issued is controlled by a Limitation Committee. Two types of licenses are issued: one which allows catching for all types of processing and one which does not allow catching for canning or fish meal.
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UNITED KINGDOM

Herring in North Sea, West Scotland and Irish Sea by Nationals	Vessel license by Area	Unknown	None	License is subject to condition that vessels will withdraw from area on 48 hours notice of fishery closures so that quotas will not be overrun.
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UNITED STATES

Salmon-Alaska	Personal by gear by area	Free	\$50.-\$200. per year	Number of licenses available is fixed.
Salmon-Washington	Boat license by gear by area	Free	\$50.-\$200. per year	The number of licenses available is fixed.
Herring and Herring Roe - California	Annual permit	No	Yearly bidding in herring roe. Unknown for herring.	Maximum number of permits in each fishery is set. Herring permits are decided by lottery each year. Herring Roe permits are issued to highest bidders.

Abalone - California	Personal Diving License	Unknown	Unknown	Number of diving licenses fixed by Legislature. Minimum number of landings or poundage are required to retain license.
Freshwater Species - Ohio	Personal license	Unknown	Varies according to type of gear or size and type of vessels, ranges from \$80. to \$800. Also royalties on few main species.	Limited entry through grand- fathering previous participants. New entrants licensed if licenses available and certain criteria are met.
Allocated Species in FCZ	Vessel permits to countries with Governing Inter- national Fisheries Agreement (GIFA)	Unknown	Fees are based on gross tonnage plus poundage charge on catch.	This is the U.S. extended zone management act scheme for foreign fishing.

The above information was developed from the following sources:

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- GERTENBACK, L.P.D., "License Limitation Regulations: The South African System", Journal of Fisheries Research Board of Canada, 30, 1973, pp. 2077-2084.
- McKELLAR, N.B. and associates, "Restrictive Licensing as a Fisheries Management Tool", F.E.R.U. Occasional Paper Series No. 6, White Fish Authority, Edinburgh, 1977.
- MEANY, T.F., "Limited Entry in the Western Australian Rock Lobster and Prawn Fisheries - An Economic Evaluation", an unpublished paper presented at a symposium on policies for economic rationalization of commercial fisheries, Powell River, British Columbia, August, 1978.

APPENDIX 2

Lists of Briefs and Letters Received

1. Bonavista Cold Storage Company Ltd., St. John's, Newfoundland.
2. Carleton Fishermen's Cooperative Association, Carleton, Quebec.
3. Ducey, Alphonsus, Keels, Bonavista Bay, Newfoundland.
4. Fisheries Association of Newfoundland and Labrador Ltd., St. John's, Newfoundland.
5. Gaspé and Bonaventure County Lobster Fishermen's Association, Gaspé, Quebec.
6. Genge, Chesley (Jr.), Chairman, Anchor Point Fisherman's Committee, Anchor Point, Newfoundland.
7. Green Bay Economic Development Association, Springdale, Newfoundland.
8. H.B. Nickerson & Sons Limited, North Sydney, Nova Scotia.
9. Inshore Fishermen's Association, Lords Cove, Deer Island, New Brunswick.
10. Labrador Inuit Association, Nain, Newfoundland.
11. Maritime Fisheries Directorate, Quebec Ministry of Industry and Commerce, Quebec City, Quebec.
12. Maritime Fishermen's Union, L'Union des Pêcheurs des Maritimes, Richibuctou, New Brunswick.
13. Moulton, Burton D., Burin, Newfoundland.
14. New Brunswick Department of Fisheries, Fredericton, New Brunswick.
15. Newfoundland and Labrador Department of Fisheries, St. John's, Newfoundland.
16. Newfoundland Fishermen, Food and Allied Workers Union, St. John's, Newfoundland.
17. Newfoundland Independent Fish Processors Association, St. John's, Newfoundland.
18. Northeast Amalgamated Fishermen's Association, Petit Rocher, New Brunswick.
19. Nova Scotia Department of Fisheries, Halifax, Nova Scotia.
20. Nova Scotia Fishermen's Association, Barrington Passage, Shelburne Co., Nova Scotia.

21. Nova Scotia Fish Packers Association, Dartmouth, Nova Scotia.
22. Port au Port District Fishermen's Association, Port au Port, Newfoundland.
23. Prince Edward Island Fishermen's Association, Charlottetown, Prince Edward Island.
24. St. Anthony Fisherman's Committee, St. Anthony, Newfoundland.
25. St. John Commercial Fishermen's Association, Lorneville, St. John, New Brunswick.
26. Storey, Colin, St. John's, Newfoundland.
27. Taylor, Vernon, Bathurst, New Brunswick.
28. United Maritime Fishermen Co-op, Moncton, New Brunswick.

APPENDIX 3

SCHEDULE OF CONSULTATIONS

December 18, 1978 - St. John's, Newfoundland

P.M. Regional representatives of the Department of Fisheries and Oceans.

December 19, 1978 - St. John's, Newfoundland

A.M. Representatives of the Newfoundland Fishermen, Food and Allied Workers Union.

P.M. Representatives of the Fisheries Association of Newfoundland and Labrador.

December 20, 1978 - St. John's, Newfoundland

A.M. Representatives of the Independent Fish Processors Association.

P.M. Representatives of the Newfoundland Department of Fisheries.

January 8, 1979 - Halifax, Nova Scotia

A.M. Regional representatives of the Department of Fisheries and Oceans.

P.M. Representatives of the Nova Scotia processing industry.

January 9, 1979 - Halifax, Nova Scotia

A.M. Representatives of Nova Scotia Fishermen.

P.M. Representatives of the Nova Scotia Department of Fisheries.

January 10, 1979 - Charlottetown, Prince Edward Island

A.M. Representatives of Prince Edward Island fishermen.

P.M. Representatives of the Prince Edward Island processing industry.

Night Representatives of the Prince Edward Island Department of Fisheries.

January 16, 1979 - Fredericton, New Brunswick

A.M. Representatives of the New Brunswick Department of Fisheries.

January 17, 1979 - Moncton, New Brunswick

A.M. Representatives of the New Brunswick processing industry.

P.M. Representatives of New Brunswick fishermen.

January 18, 1979 - Quebec City, Quebec

P.M. Representatives of the Quebec processing industry.

January 19, 1979 - Quebec City, Quebec

A.M. Representatives of Quebec fishermen.

P.M. Representatives of the Directive générale des Pêcheurs
Maritimes (Quebec Department of Industry and Commerce).

March 1, 1979 - St. John's, Newfoundland

A.M. Representatives of the Fisheries Association of Newfoundland
and Labrador (attended by Newfoundland government representatives).

P.M. Representatives of the Independent Fish Processors Association
(attended by Newfoundland government representatives).

March 2, 1979 - St. John's, Newfoundland

A.M. Representatives of the Newfoundland Fishermen, Food and Allied
Workers Union (attended by Newfoundland government representatives).

March 5, 1979 - Halifax, Nova Scotia

P.M. Representatives of the Department of Fisheries and Oceans of
the Maritimes and Newfoundland Regions.

March 6, 1979 - Halifax, Nova Scotia

Representatives of Nova Scotia fishermen (attended by
Nova Scotia government representatives).

March 7, 1979 - Halifax, Nova Scotia

Representatives of the Nova Scotia processing industry
(attended by Nova Scotia government representatives).

March 8, 1979 - Charlottetown, Prince Edward Island

Representatives of Prince Edward Island fishermen (attended
by Prince Edward Island government and processing industry
representatives).

March 13, 1979 - Moncton, New Brunswick

Representatives of New Brunswick fishermen (attended by
New Brunswick government representatives).

March 14, 1979 - Moncton, New Brunswick

Representatives of the New Brunswick processing industry
(attended by New Brunswick government representatives).

March 15, 1979 - Quebec City, Quebec

Representatives of fishermen, processing industry and
Quebec government.

APPENDIX 4

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STATISTICAL TABLES

TABLE 1 - Number and Value of Fishing Vessels by Province and Gross Tonnage, Atlantic Coast, 1976

Categories	Nova Scotia	New Brunswick	Prince Edward Island	Quebec	Newfoundland	Total
(Values given in thousand dollars)						
Under 10 tons						
Number	7,006	3,287	2,136	3,728	8,950	25,097
Value	5,497	2,791	3,112	6,637	14,998	33,035
10-24.9 tons						
Number	969	937	108	160	292	2,466
Value	3,004	2,905	335	1,885	5,941	14,070
25-49.9 tons						
Number	117	134		73	205	529
Value	2,457	2,814		4,075	10,763	20,109
50-99.9 tons						
Number	75	55	3	31	62	226
Value	4,875	3,575	195	2,521	7,268	18,434
100-149.9 tons						
Number	13	17		14	6	50
Value	2,470	3,230		2,367	1,700	9,767
150 tons and over						
Number	135	16	5	8	86	250
Value	54,000	6,400	2,000	7,935	75,220	145,555
TOTAL						
Number	8,315	4,446	2,242	4,014	9,601	28,618
Value	72,303	21,715	5,642	25,420	115,890	240,970

Source: Annual Statistical Review of Canadian Fisheries, Volume 10, 1977, Department of Fisheries and Oceans, Ottawa.

TABLE 2 - Number of Fishermen Classified by Extent of Employment,¹ by Province,
Atlantic Coast, 1976

<u>Nova Scotia</u>	
Full time	3,850
Part time	3,093
Occasional	<u>3,466</u>
TOTAL	10,409
 <u>New Brunswick</u>	
Full time	436
Part time	2,873
Occasional	<u>2,767</u>
TOTAL	6,076
 <u>Prince Edward Island</u>	
Full time	41
Part time	1,791
Occasional	<u>1,034</u>
TOTAL	2,866
 <u>Quebec</u>	
Full time	
Part time	1,907
Occasional	<u>4,176</u>
TOTAL	6,083
 <u>Newfoundland</u>	
Full time	621
Part time	3,718
Occasional	<u>11,012</u>
TOTAL	15,351
 <u>TOTAL - Atlantic Coast</u>	
Full time	4,948
Part time	13,382
Occasional	<u>22,455</u>
TOTAL	40,785

¹ The classification of fishermen by extent of employment is based on the time spent in fishing activities, as follows:
full time - 10 months or over; part time - 5 to 10 months; occasional - less than 5 months.

Source: Annual Statistical Review of Canadian Fisheries, 1977, Volume 10,
Department of Fisheries and Oceans, Ottawa.

TABLE 3 - Number of Licenses Issued for Limited Entry Fisheries by Region and
by Fishery, Atlantic Coast, 1978

	<u>Newfoundland</u>	<u>Maritimes</u>	<u>Quebec</u>	<u>Total</u>
Salmon	5,561	247	95	5,903
Lobster	4,857	8,218	594	13,669
Crab	51	130	58	239
Shrimp	39	25	48	112
Trawlers < 65'	73	914	121	1,108
Trawlers > 65'	83	136	31	250
Herring Seiners > 65'	8	28		36
Herring Seiners < 65'	127	36		163
Herring Weirs		297		297
Scallop Offshore		78		78
Offshore lobster		8		8
Tuna	16	231	19	266

Source: Unpublished Departmental data.

TABLE 4 - Age Composition of the Registered Fleet of Fishing Vessels, by Regions,
Atlantic, 1978

<u>Age (years)</u>	<u>Newfoundland</u>	<u>Maritime Provinces</u>	<u>Quebec</u> ¹	<u>Total</u>
1	1,272	351	3	1,626
2	1,734	638	4	2,376
3	1,784	640	6	2,430
4	1,856	636	8	2,500
5	1,609	713	9	2,331
6	1,206	680	5	1,891
7	1,087	692		1,779
8	689	533	3	1,225
9	1,251	696	1	1,948
10	517	476	6	999
11	621	554	13	1,188
12	473	420	10	903
13	433	474	7	914
14	519	647	17	1,183
15	360	478	14	852
16	186	413	9	608
17	203	393	4	600
18	97	249	13	359
19	237	322	2	561
20	43	197	2	242
21	69	170	1	240
22	33	142	5	180
23	42	114	3	159
24	42	118	1	161
25 and over	113	404	6	523
TOTAL	16,476	11,150	152	27,778

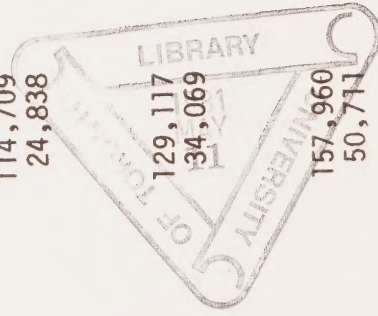
¹ dragger and trawler only

Source: Unpublished departmental data.

TABLE 5 - Nominal Catches and Landed Values, by Province, Atlantic Coast, 1974-78

(Quantities in metric tons and values in thousand dollars)

	Nova Scotia	New Brunswick	Prince Edward Island	Quebec	Newfoundland	Total
1974						
Nominal catches	344,475	112,431	17,715	56,777	249,605	781,003
Landed value	81,166	21,852	12,031	13,650	42,874	171,573
1975						
Nominal catches	356,457	120,496	16,313	56,503	255,576	805,345
Landed value	92,648	25,327	12,416	14,643	45,785	190,819
1976						
Nominal catches	367,883	114,709	17,134	41,955	339,211	880,892
Landed value	106,686	24,838	12,719	15,131	64,716	224,090
1977						
Nominal catches	407,074	129,117	19,801	54,296	392,786	1,003,074
Landed value	133,145	34,069	15,164	20,377	85,497	288,252
1978 (preliminary)						
Nominal catches	446,160	157,960	25,646	67,276	437,612	1,134,654
Landed value	195,029	50,711	23,224	29,169	110,923	409,056



Source: Annual Statistical Review of Canadian Fisheries, Volume 10, 1977, Department of Fisheries and Oceans, Ottawa, for the years 1974 to 1977. Unpublished data for the year 1978.

